Modern

ELEMENTARY

Curriculum

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REVISED EDITION

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Again, to Faye, Tim, and Patty

SINCE THE first edition of *Modern Elementary Curriculum* was published in 1953, significant changes have taken place in American life, research has thrown new light on the teaching-learning process, and important modifications have been made in the curriculums of many elementary schools. These developments have made it desirable to revise the text, to add two new chapters, and to bring the material in all of the chapters up to date.

The point of view in regard to the role of the elementary school is essentially the same as that contained in the first edition: education is concerned primarily with the improvement of living, life should be better and richer for children and adults because of the kind of living and learning that goes on in the elementary school, and the program of the school should be geared to the realities and ideals of the culture and to the characteristics and needs of children. The American concept of free public education for every child in accordance with his needs and capacities is as valid today as it was before satellites began to encircle the globe. However, the realities of the age in which we live have created a need for learning the fundamental skills more rapidly and more thoroughly than ever before, for encouraging creativity and individuality, and for providing better educational programs for gifted children.

In order to make the revised edition more useful to teachers and students of elementary education, new and up-to-date annotated reading lists and lists of films have been provided at the close of each chapter; a section on foreign languages has been added to the chapter on language arts; and two new chapters have been added on "The Recent Past and the Foreseeable Future." The check lists for evaluating the elementary school program have been revised and placed together at the close of Chapter 15.

Again, Professor Celia Stendler, of the University of Illinois, has prepared the photo-comments and the problems and projects for each of the chapters, which readers of the first edition found so valuable. The author is also grateful for her excellent criticisms of the entire manuscript.

Special appreciation is expressed to several of the author's graduate stu-

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Curriculum Foundations

☐ EVERY GENERATION of Americans has sought its own answer to the problem of providing an education suited to existing needs, resources, and desires. The present generation is no exception to the rule. Faced with the difficult task of providing adequate buildings, competent teachers and other specialized personnel, and modern equipment for a tidal wave of children, laymen as well as professional educators are calling for a re-examination of the purposes of the elementary school in our society and for a reshaping of its program in the light of new conditions of living.

The Changing Curriculum

The free tax supported schools are the sinews of our society; they are the products of our special history, a concrete manifestation of our unique ideals, and the vehicle by which the American concept of democracy may be transmitted to our future citizens. The strength of this republic is therefore intimately connected with the success or failure of our system of public education.—JAMES BRYANT CONANT

The Meaning of "Curriculum"

Traditionally, curriculum has meant the subjects taught in school, or the course of study. The tendency in recent decades has been to use the term in a broader sense to refer to the whole life and program of the school. The term is used in this book to include all the experiences of children for which the school accepts responsibility. It denotes the results of efforts on the part of the adults of the community, state, and nation to bring to children the finest, most wholesome influences that exist in the culture.

The function of the elementary-school curriculum is determined by two basic factors. On the one hand

we have millions of children in the communities of this nation—children with varying capacities for learning and with endless potentialities for good or evil in the life of the community and nation, On the other hand we have the problems of living in our society—the work that needs to be done if life is to be rich and full for every individual. The curriculum is the instrumentality through which these two factors are brought together; it consists of experiences through which children achieve self-realization and at the same time learn to contribute to the building of better communities and a better America of tomorrow.

Some of the implications of this broader concept of the curriculum follow:

1. The curriculum exists only in the experiences of children; it does not exist in textbooks, in the course of study, or in the plans and intentions of teachers. The course of study has the same relationship to the curriculum that a road map has to the actual experiences involved in taking a trip. In order to evaluate the curriculum of a school, it is necessary to observe carefully the quality of living that goes on in it.

2. The curriculum includes more than content to be learned. The selection of useful, accurate content is a very important responsibility of teachers, but content does not constitute the curriculum until it becomes a part of the experience of the child. The amount of content that becomes curriculum for one child may differ from that which becomes curriculum for another. The human relations in the classroom, the methods of teaching, and the evaluation procedures used are as much a part of the curriculum as the content to be learned.

3. The school curriculum is an enterprise in guided living. Instead of being as broad as life itself, the school curriculum represents a special environment that has been systematized, edited, and simplified for a special purpose.

4. The curriculum is a specialized learning environment deliberately arranged for directing the interests and abilities of children toward effective participation in the life of the community and the nation. It is concerned with helping children enrich their own lives and contribute to the improvement of society through the acquisition of useful information, skills, and attitudes.

5. The problem with which the curriculum worker is concerned is not merely that of deciding what subjects should be taught, of improving the mind, or of increasing knowledge; it is also a problem of improving individual and community living.

The Need for Curriculum Improvement

(The school, like other social institutions, is influenced by tradition and inertia to such an extent that persistent effort is needed to keep its program in harmony with life in a rapidly changing society.) The remaining chapters in this book suggest many changes that are needed in the elementary-school curriculum in most communities. The need for making better use of what we know about children, for making the classroom a laboratory for democratic living, for improving the classroom environment, for providing more effective learning materials, for developing more effective procedures for working with parents, for placing more emphasis on mental health in instructional practices, for using more effectively the findings of research in teaching school subjects, and for creating a more comprehensive program for evaluating pupil progress—these and many other avenues to better elementary schools are explored.

This section is limited to a consideration of the kind of elementary-school program needed in post-Sputnik America. Today the public spotlight is being turned upon the public schools as never before. In headline after headline and in increasingly vigorous language since the first Russian satellite settled in its orbit we are reminded of inadequacies in our educational system. We are told that the schools are slighting the fundamentals, that more attention is devoted to the social development of children than to the intellectual, that the gifted child is being neglected, and that the content of the curriculum is shallow, trivial, and anti-intellectual. Secondary schools have borne the burden of the criticism, although elementary schools have also shared the critical spotlight.

In many ways this open debate about educational issues is very fine. Open debate is in the best American tradition and many educators who have been trying to arouse the nation to the plight of the schools since World War II are now hopeful that constructive steps will be taken to strengthen our educational system. The possibilities for improvement are very real; many of the criticisms and recommendations are reasoned and temperate and reflect careful study and analysis. Some, however, if followed, would destroy the gains that have been made in elementary education and that have been reflected in the comparative achievement in school subjects, of children in our schools today and those of a generation ago. Study after study has shown that elementary children at the present time are making higher scores on the same achievement tests than those of children some years ago. Despite the fact that they are younger, today's pupils score almost a grade higher on some of these tests.

Improvement in elementary education is reflected also in the changed attitude of children today toward going to school. Most pupils *like* school;

it is no longer regarded as a dread place of confinement. More humane methods of discipline, subject matter that is meaningful to the child, and improved techniques of teaching have contributed to this change in attitude. These gains we want to keep.

At the same time, we want to be sure that the elementary school makes continuous improvement in the performance of its functions. These include helping boys and girls gain knowledge of their social, biological, and physical world, acquire the concepts and skills needed in arithmetic and the language arts, develop an appreciation for fine music, art, and literature, and acquire the concepts and skills necessary to work and live with other human beings. And we want to be sure that each concept, each fact, each skill to be included in the curriculum is essential to the education of children in the modern world.

Unfortunately, there is disagreement over what is essential and what is trivial. A school official in a midwestern community was asked by one parent to drop the teaching of science in the elementary school (this was prior to Sputnik) and to add French. This same official was approached by another parent who urged him to discontinue the teaching of social studies and to add rhetoric in grades above the first. Still a third wanted the school to expand the study of literature in the intermediate-upper grades and to place less emphasis upon the teaching of formal grammar. Apparently the trivial is always what the other person is interested in.

In the face of such conflicting demands, educators must be prepared to make curriculum choices. These choices should be made partly in the light of the social forces in the world today. We know, for example, that the fate of America is inextricably linked with that of the rest of the world; whether we like it or not, we can never go back to economic or political isolationism. Yet, pupils in American schools are still spending most of the elementary years studying their own country without regard to what is going on outside our borders. When they do study other cultures they study those that are relatively unimportant. The average American child spends more time on the life and habits of the Eskimo than he does on those of a Russian child. Both social studies and science curriculums must be evaluated in terms of the kind of world in which we live.

Choices should also be made in the light of our knowledge of the nature of the elementary-school child and of the learning process. For example, if we think of the child as an empty organism into which knowledge can be poured, we can plan drills on the multiplication tables to ensure their mastery. But a school curriculum that depends largely upon rote memorization and recall of facts is not the kind of curriculum that stimulates a child's intellectual curiosity or encourages creativity. Children in a modern arith-

metic program know the excitement of discovering number relationships themselves before practice for mastery is planned; through the use of simple, concrete materials, they learn the results of repeating groups of objects and taking groups apart and they see for themselves that multiplication and division are inverse operations. When the child is an active participant in discovering knowledge, learning is much more effective.

Not only how something is learned but also what is being learned should receive careful consideration. In all areas of the curriculum, the pupil should deal with content that challenges him intellectually, that has meaning in his life, that he can relate to what he already knows or can use in the solution of problems. Content that makes little sense to him or that represents mental gymnastics (e.g., memorizing the capitals of all the states) has no place in the modern curriculum. In the chapters that follow we shall return to criticisms of the schools and to these two guiding principles of curriculum development to see how they may be applied to strengthening the curriculum.

A Heritage and a Challenge

The elementary school has been called the most typically American of our social institutions, democracy's gift to children, and the cornerstone of our system of free public education. Its ancestry can be traced to liberal movements in Europe which were a protest against the established schools because they were not open to the common people.

From the very beginning, the evolution of the common school in this country has been closely associated with the ideal of human freedom. Self-realization for every individual is the central ideal of our society, the bedrock of our civilization, the American dream. This ideal has run like a brightly colored thread through our literature, our art, and our music. The ideal itself is centuries old, but no other nation has approached it with stronger faith or greater determination, and no other nation has made public education available on so large a scale for the purpose of implementing it. Neither the present status nor the future promise of the elementary school can be fully appreciated without some knowledge of the forces that have operated during the last three hundred years both for and against the development of a democratic program of education in this country.

The elementary school as it exists today represents a heritage of more than three centuries of persistent effort by men and women who have struggled against great odds to develop a program of education designed to make our nation both strong and free. The story of the American past does not consist entirely of the exploits of statesmen and military men; the ideas and

accomplishments of leaders in the cause of public education have been equally significant in making America what it is today.

One of these leaders was the father of the educational revival of the last century; Horace Mann had not only a definite plan for the common schools but the eloquence and logic to awaken an apathetic public to an appreciation of public education as the foundation of democracy. The same is true of Francis W. Parker, who conducted the Cook County Normal School to prepare teachers "in the methods of democracy . . . that which will set the souls of children free." John Dewey established at the University of Chicago in 1896 a laboratory school which was operated on the principle that children learn best through meaningful experiences rather than through passive sitting and listening. Although Dewey's ideas did not find widespread acceptance at the time, they did prepare the way for the experience curriculum and for democratic classroom procedures, which have been receiving increasing recognition in recent years.

Leadership in the cause of free public education was not limited to members of the teaching profession. Literary men, statesmen, and leaders in industry, agriculture, and labor helped to build a climate of public opinion favorable to public education. One of these was Samuel Gompers, an intelligent and energetic leader in the labor movement for more than sixty years. He insisted that every individual, regardless of the circumstances into which he was born, was entitled to the greatest possible opportunity for self-development and that an education which developed the creative abilities of the individual brought into the national life a force that made for a larger measure of freedom. In one of his famous speeches, Gompers expressed clearly the central American belief in the worth of the individual human being: "You cannot weigh a human soul in the same scales with a piece of pork."

In spite of the vision and energy of these and scores of other leaders, the American dream as it applies to education has not yet been fully realized. Millions of American children are still being denied the opportunity for the greatest possible development of their talents through education.[1] This situation represents a failure to live up to our democratic aspirations and a tragic waste of our valuable human resources. It is obvious that the school alone cannot remove the economic barriers that prevent many parents from keeping their children in attendance. However, recent studies have revealed that many parents who state at first that they are not financially able to keep their children in school admit later that they could manage to do so if the children were really interested in school. This indicates that at least a part of the difficulty lies in the fact that the school program fails to stimulate children.

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[1] The research files of the National Education Association for the year 1950 indicate that approximately 14 per cent of the children of school age were not in school.

The provision of individually adequate educational opportunities for all American children is one of the supreme challenges of our times.

Historical Influences on the Curriculum

The brief historical summary that follows can in no sense substitute for a thorough study of the evolution of the common school in this country and in Europe. It is intended merely to illustrate the principle that the school curriculum reflects the realities and ideals of the society that supports the school.

The Colonial Period: 1647–1776

The language used in the preamble of the "Old Deluder Satan" Act, passed by the Massachusetts General Assembly in 1647, indicates clearly the religious motive for education in the New England colonies. "One chief project of the Old Deluder Satan, to keep men from a knowledge of the Scriptures" was listed as the primary reason for requiring towns to establish common schools and grammar schools. This act represented not only the first piece of legislation in America requiring that schools be established but the first example in the history of the world of the provision of schooling for children at the expense of the community. This was a truly revolutionary idea, and one that foreshadowed the development on this continent of a unique plan of public education. The date, therefore, provides a convenient starting point for a discussion of more than three hundred years of curriculum development in this country. It should be understood, however, that elementary schools existed in Massachusetts before that date and that more than two hundred years elapsed before a system of free, universal, public education was firmly established in the United States as a whole.

Various types of schools—charity schools, parochial schools, dame schools, and apprenticeship schools—were established during the colonial period, but they were all dominated by the authoritarian concept of education. The curriculum consisted of reading, writing, spelling, arithmetic, the catechism, prayers, and the singing of hymns. Pupils were taught individually by the memorizing method, and the schools were expected merely to add a veneer of literacy to the education the child received at home.

The types of schools established in the several colonies illustrate the proposition that education is influenced by prevailing social realities and ideals. In New England, where the people were firm believers in the "church-state" form of government, the town school prevailed. The religious beliefs

established by the Reformation led to the need for schools to teach children how to read the Bible. Since the town government was an agency of the church, the schools were town schools. In Virginia and the southern colonies generally, where the class distinctions of the mother country were reproduced, the apprenticeship system prevailed. The upper classes employed tutors or sent their children to England to be educated, but for the lower classes the apprenticeship system provided preparation for the trades, which were regarded as their life work.

The discipline in the colonial schools emerged from the theological belief of the time—that children were born in total depravity and were to be regenerated only by the severest type of discipline. The whipping post was therefore very much in evidence, and the continual flogging, wailing, and tears which were associated with the school made it resemble a prison rather than a place for happy, busy children. It should be remembered that the treatment of criminals at that time was cruel beyond description and that capital punishment was sometimes inflicted upon young people for persistent disobedience of parents.

The religious motive for schools in New England, the aristocratic type of education in the southern colonies, and the cruel type of discipline prevailing in all the colonial schools illustrate clearly how school programs tend to reflect the conditions and ideals of the social group that supports them.

The National Period: 1776–1876

It was during the national period that the battle was fought and won for a system of public elementary schools open to all children—schools that were free, tax-supported, nonsectarian, compulsory, and state-controlled. The public-school revival was well launched by 1840 and had in general accomplished its purpose by the close of the reconstruction period in 1876, except in the southern states.

The dominant aim of education during the national period was political. The political ideals expressed in the Declaration of Independence led to the recognition of the need for universal public education to develop intelligent citizens. At the time of the framing of the Constitution of the United States, various proposals were made for establishing a system of public education extending from the common schools to a national university. Although education is not mentioned in the Constitution, Washington advocated national aid to education in his first address to Congress, and Jefferson spent a great deal of time planning a complete system of public education for the state of Virginia. John Adams, James Madison, James Monroe, and many other leaders in early American political life stressed the necessity of education as a

basis for the success of a democracy. Jefferson expressed the belief of many when he said, "If a nation expects to be ignorant and free in a state of civilization, it expects what never was and never will be."

The movement to establish a system of public education faced a number of obstacles. Among these were the opposition from private schools, sectarian religious jealousy, the idea that public education meant pauper education, and the claim that the public school was based on a socialistic principle. At the same time, however, a number of factors were operating to stimulate the development of such a system. Among these were the Sunday School movement, the monitorial system,[2] the infant-school movement, and the influence of foreign example, particularly that of France and Germany. Official reports describing the Prussian system of state education were reprinted and distributed by several states. Furthermore, a large number of educated Germans emigrated to this country after the Revolution of 1848 and brought with them a devotion to the idea of a school system supported and controlled by the government.

Making use of these favorable factors, such able and energetic leaders as Horace Mann, Henry Barnard, Caleb Mills, and Samuel Galloway pushed the educational revival to a successful conclusion, so that by 1876 public school systems had been established in all except the southern states; there the principle had been accepted but actual establishment of schools had been delayed by the deplorable economic conditions that followed the Civil War. The battle for free public education had been fought and won. With a few exceptions every child in America could now have an elementary education at public expense.

The quality of education provided, however, had not been changed fundamentally; the type already in existence had simply been made available to more children. New subjects had been added to the curriculum; methods had been changed to solve the problems of educating large numbers; normal schools had been established to train teachers in the common branches; but the school was still operated on the aristocratic principle of selection and elimination. The elementary school was regarded as a place where a few of the brighter pupils were prepared for high school rather than as a place where every child prepared for effective participation in the life of his community and nation.

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[2] The monitorial system was introduced in this country about 1818 by Joseph Lancaster, who had developed the system in England as a sort of substitute for a national system of schools. From two hundred to a thousand pupils were assembled in a large room, where the teacher taught a few clever pupils, known as monitors, a lesson from a printed card. The monitors, in turn, took groups of about ten pupils each to stations around the wall and taught them what they had just learned. The monitorial system, which "was born in poverty," hastened the adoption of the free public-school system by gradually accustoming the public to the idea of tax-supported schools.

The Period of Expansion and Reform: 1876–1929

The period from 1876 to 1929 witnessed the expansion of the United States in business and industry, in territory, and in influence on world affairs. The history of these 53 years is the story of the efforts of a free people to adjust governmental machinery to rapidly changing economic and social circumstances. The growth of cities, of factories, and of monopolies produced a complex, industrialized economy in place of the simple, agricultural one of former years. Social and economic forces and the energy and initiative of individuals were building a powerful nation, but progress was not always measured in terms of human welfare. The exploitation of human and natural resources, the slums and sweatshops, child labor, and the unwholesome influence of money in politics brought with them the demand for reform. The continuing struggle to meet these problems supplies a large portion of the subject matter of the historian of this period.

An examination of the political history of this period reveals a continuous emphasis on reform. Grover Cleveland hammered away continually at tariff reform. Theodore Roosevelt was energetic in his efforts to reduce the power of "big business" over government. Woodrow Wilson was keenly concerned with carrying these reforms forward and with extending what he called "The New Freedom." These reforms represented not merely the desires of official leaders; to no small degree they expressed the spirit of the times.

EXPANSION AND REFORM IN ELEMENTARY EDUCATION. The period from 1876 to 1929 was one of expansion and reform for the public elementary school. Quantitatively, the elementary school of 1929 had little resemblance to that of 1876. The enrollment had more than doubled, many new subjects had been added to the curriculum, the length of the school term had increased by more than 30 per cent, and per-pupil expenditures had enormously increased.

Teacher education, always a major influence in determining the quality of the curriculum, expanded rapidly during this period. The first private normal school was established at Concord, Vt., in 1823; the first state normal school at Lexington, Mass., in 1839; and by 1861 normal schools existed in all except the newer states. The first permanent, exclusively professional chair in education was established at the University of Michigan in 1879. The amount of professional training possessed by most teachers at the close of the nineteenth century, however, was pitifully small. As late as 1914 it was possible to obtain a teaching certificate by passing an examination on the common branches and answering a few simple questions dealing with a subject called "pedagogy." Not even a high-school education was required.

By 1929 many normal schools had become four-year teachers' colleges, and schools of education had been established in virtually all universities.

The curriculum in teacher education had been expanded to include educational psychology, child psychology, educational measurement, special methods, history and philosophy of education, curriculum development, and practice teaching.

At the beginning of this period, pupil progress was evaluated by means of oral quizzes, written examinations prepared by teachers, ciphering matches, and spelling bees. By the end of the period, schools were using standardized achievement tests in the school subjects, individual and group intelligence tests, adjustment inventories, and aptitude tests. Supervisors of instruction and directors of research had been added to the school staff to make the teaching of the several subjects more uniform and more efficient.

Much progress was made during this period in providing for individual differences among pupils—differences revealed by the use of objective tests, developed by psychologists and measurement experts. The curriculum was, in the main, still regarded as a number of subjects to be mastered, but efforts were being made to allow the slow child, the average child, and the bright child to master the subjects at different rates of speed.

FACTORS OPERATING TO ENTRENCH THE FORMAL, REGIMENTED TYPE OF PROGRAM. During the period of expansion and reform, several factors operated to entrench the formal, regimented, undemocratic program of elementary education that had been imported from Europe during the midnineteenth century. One factor was the rapid growth of high schools, which by various means managed to impress upon the elementary schools the necessity for pupils to master a standardized list of facts and skills as preparation for entrance to high school. A second factor was the mechanistic, stimulus-response psychology that emphasized repetition as the means of learning and the reproduction of the material learned as the proof of learning. A third factor was the influence of the factory ideal on school practice. In the report of their survey of Middletown, the Lynds state that the typical school of 1925 was "like the factory—a thoroughly regimented affair." [a]

In the following passage, Hopkins shows clearly the resemblance of a classroom to a factory:

> In the school the teacher was the operator of the machine; the machine was the subject matter. The raw material was the pupil. The subject matter was analyzed for the teacher into minute parts, each of which was different from every other part. Many of these parts constituted the work of a grade. A pupil was put through the many machines. At the end of each operation he was inspected by someone other than the teacher. This person with a series of educational calipers determined whether the pupil was properly machined to standard form. If he did not quite measure up to normal he was sent back for further grading or polishing by the aid of such abrasive devices as individual help, extra drill, home work, and the like. . . . The

a Robert S. and Helen M. Lynd, *Middletown* (Harcourt, Brace & Co, 1929), p. 188.

operators or teachers were now given more intensive training in the operation of their machines. They specialized on a particular machine or in a particular subject to the exclusion of all others. Schools became more departmentalized, teachers became narrower and narrower in their range of activities. But still unsatisfactory parts were obtained.[4]

Thus, several factors converged during this period to make the elementary school a thoroughly regimented, undemocratic institution, greatly concerned with facts and skills but little concerned with developing desirable social behavior, creative expression, good work habits, self-direction, or wholesome attitudes. In spite of the efforts of such men as Dewey, Parker, Kilpatrick, Meriam, and Collings to develop a school program based on the characteristics and needs of children and the demands of living in a democratic society, the elementary school remained, until 1929, basically the same as it had been in 1876 except for a great quantitative expansion. It was still "in the grip of the machine."

The Period of Increased Responsibilities: 1929 to the present

Since 1929, three developments on the international scene have had a profound influence on American life: the Great Depression, World War II, and the Cold War. These periods of national emergency stimulated new developments in science and technology, increased the tempo of American life, and placed increased responsibilities on the public schools.

The stock market crash of 1929 marked the end of the period of postwar prosperity and ushered in a period of economic depression, business failures, and unemployment. These conditions centered attention on all our social and economic institutions and brought about many readjustments in governmental machinery intended to make the government more responsive to human needs. The efforts of a free people to provide a maximum of economic security for all and at the same time to preserve the traditional American ideal of individual freedom have made the period since 1929 a time of conflict between opposing interests.

The stresses and strains that were present in the culture during the 1930's were reflected in demands for reform in the school program. Criticisms of school programs that lacked social orientation had been heard for many decades, but they reached a climax during the depression years. It was suggested that the schools should build a new social order, that school subjects should be eliminated, and that a radically different form of curriculum organization should be developed. Although many of the proposals for curriculum

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[4] L. Thomas Hopkins, *Interaction: The Democratic Process* (D. C. Heath & Co., 1941), pp. 403–405. Reprinted with permission of the publishers.

change were impractical, they did serve to focus attention on the need for a curriculum framework that would permit the school to make a more direct contribution to persistent problems of living.

World War II placed heavy strains on our social and economic institutions and increased the responsibilities of public schools. Our troops fought in practically every quarter of the globe, we developed a two-ocean fleet, the airplane came into its own as a major weapon, and our country became the arsenal as well as the breadbasket of the free world. Teachers left classrooms to take their places in the armed services and in war industries, school programs were geared to the war effort, and the armed services developed new methods of teaching and new instructional materials. At the close of the war, teaching had risen to a new position of importance and recognition in our culture. Developments during the Cold War which followed and their implications for education will be discussed in Chapter 16.

The curriculum in transition

The period since 1929 has been characterized, then, by efforts not merely to improve the curriculum within the traditional framework but to reorganize it in the light of social, psychological, and philosophical principles that have been emerging during recent decades. These principles may be briefly summarized as follows:

1. We live in a dynamic, rapidly changing society. Since the rate of change is uneven both in technological advances and in social institutions, maladjustments frequently develop in the culture. Almost everyone agrees that it is one function of organized education through the medium of the school curriculum to keep each new generation informed about the changes that are taking place and to help correct maladjustments in the culture. A horse-and-buggy curriculum in the space age is nothing short of social disaster, not only for ourselves but perhaps for the whole human race.

2. It is one function of the school curriculum to help develop citizens who are capable of preserving and improving our democratic way of life.

3. Learning is not a mechanical process of adding parts to parts; it is a process of experiencing in which the total organism undergoes change as a result of interaction with the environment. Problem-solving is one of the chief means of education and it is the function of the curriculum to provide experiences that are significant and useful in the ongoing process of living. Experiments indicate that unless learning involves the development of new behavioral responses it has little permanence or value. "How it was learned determines the usefulness of learned behavior." [5]

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[5] Robert H. Beck, Walter W. Cook, and Nolan C. Kearney, *Curriculum in the Modern Elementary School* (Prentice-Hall, Inc., 1953), pp. 44–45.

THREE CENTURIES OF CURRICULUM DEVELOPMENT

	Colonial: 1647-1776
Dominant motive	Religious
Content	Reading, writing, spelling, arithmetic, prayers, hymns, catechism
Administrative organization	Ungraded
Typical schools	Dame schools Apprentice schools Reading and writing schools Ciphering schools
Methods	Individual memorization
Curriculum organization	Separate subjects
Professional education of teachers	None
Control of curriculum making	Local
Materials of instruction	Hornbook New England Primer

National: 1776-1876	Expansion and Reform: 1876-1929	Increased Responsibility: 1929-Present
Political	Economic	Social-Intellectual
Reading, writing, spelling, arithmetic, physiology, hygiene, grammar, history, geography, drawing, music, agriculture, good behavior	Reading, writing, spelling, arithmetic, physiology, hygiene, English, grammar, language, history, Constitution of U.S., geography, music art and handiwork, citizenship, manual training, homemaking, civics, physical education, nature study, literature, good behavior	Language arts, social studies, arithmetic, science, arts and crafts, health and physical education
Ungraded	Graded Departmental Platoon	Grade divisions disappearing
Kindergartens Eight-year elementary schools	Nursery schools Kindergartens Six-year elementary schools	Early childhood Later childhood
Monitorial Group instruction	Recitation Supervised study Units (individual) Project method	Recitation Experience units Committees
Separate subjects	Separate subjects Correlation Fusion	Separate subjects Correlation Fusion Integration
Normal schools	Teachers colleges Schools of education In-service education	Experiments in functional types of teacher-education
Local and state	State departments of education National committees	National committees State committees Local committees
Ungraded textbooks	State-adopted texts for each subject	Textbooks, libraries, excursions, audio-visual materials

4. It is the function of the elementary school to teach children not only useful knowledge and skills but also the use of these in the solution of actual problems of living.

Changes in the elementary-school curriculum in harmony with the principles listed above have already taken place in many school systems. Because forces are in operation that forecast changes in American life at a rapidly increasing tempo in the next twenty years, it is reasonable to expect that changes in the elementary-school curriculum to meet these new realities will emerge in the next few decades. Some of the changes that can be expected will be discussed in the last chapter of this book. It is the purpose here merely to summarize some of the significant trends that have been clearly discernible during the last few decades:

1. Progress has been made in developing a more unified elementary-school curriculum. Instead of nearly twenty separate school subjects taught in isolation from one another, there are now usually six broad areas that constitute the instructional program. For example, reading, writing, spelling, oral and written language, children's literature, and listening are taught together as the broad field of language arts.

2. Progress has also been made in bringing more reality into the school experiences of boys and girls. What is taught in school is related more directly to life outside the school. This is accomplished through trips into the community, through bringing resource persons from the community into the classroom, through building the curriculum around life in the community, and through the use of a wide variety of instructional materials to supplement textbooks.

3. The emphasis on democratic living in the classroom has been increasing. Experimental evidence concerning the effects of autocratic and democratic control of groups has accumulated; descriptions of practice in classrooms where teachers have helped pupils identify goals, make plans, activate plans, and evaluate progress have been available in greater quantity than ever before; and teachers have become more expert in human relations.

4. There has also been a trend toward more continuity in the school experiences of boys and girls. Rigid promotion schedules, grade standards, and minimum essentials have been modified. The two-division elementary school—one division consisting of grades 1, 2, and 3 and the other of grades 4, 5, and 6, with no annual promotions within these divisions—has gained wide acceptance. Frequently the same teacher will remain with a group of children for two or three years. This enables the teacher to learn more about the characteristics, interests, and abilities of each child and to make better provision for individual differences.

5. The traditional recitation based on a single textbook has been giving

way to unit teaching in which emphasis is placed on pupil participation in planning and carrying out learning activities. Although specific time is alloted to broad fields of subject matter, a large block of time is provided for unified activities that cut across subject-matter lines.

6. Specialized preparation is now generally required for elementary-school teachers and principals. It is becoming less common for teachers and principals whose preparation has been for high-school work to be assigned to elementary schools. Single salary schedules and higher certification requirements have increased the prestige of the elementary-school principal and teacher.

7. Classroom teachers now participate more effectively in determining the purposes, content, and nature of the elementary-school curriculum. The belief that prevailed in the early part of the twentieth century that the content of the curriculum should be determined by subject-matter specialists alone has almost completely disappeared. The child and frequently his teacher were too far removed from the adult specialist for the content selected in this manner to have much meaning. Forward-looking schools, particularly in the larger school systems, make it possible for committees of classroom teachers, assisted by experts in content and method, to develop curriculum guides and units of work in the various curriculum areas. Laymen frequently assist the local staff in curriculum-planning. Although many state departments of education still publish curriculum guides or courses of study, these are generally illustrative rather than mandatory in nature. State departments of education now usually serve to lead, to stimulate, and to coordinate rather than to dictate and to inspect.

8. The child-centered school movement, which received a great deal of attention during the 1920's, placed major emphasis on the interests and normal activities of children. It represented a revolt against the imposition of adult-selected subject matter on children and the consequent restriction on the freedom of the teacher to select learning experiences in terms of the interests and needs of a specific group of pupils. Although practices within this movement have sometimes gone to extremes, the movement has done much to free elementary classrooms from the dominance of memorization and drill, exclusive dependence upon textbooks, and autocratic practices on the part of the teacher.

9. The social-centered school movement, which began to attract much attention in the 1930's, placed major emphasis on significant aspects of living and gave pupils an opportunity to participate in socially desirable enterprises. This movement has done a great deal to narrow the gap between school and community and to give the elementary-school program social orientation and direction.

A Balance Between Extremes

The appearance in recent years of a series of organized attacks on the public schools by individuals and organizations skilled in the distortion of evidence and the obscuring of issues has caused great concern in regard to the future of modern educational practices. Recent studies indicate that the American people can be depended upon to support a program of education that makes sense when they are given the opportunity to find out what the program is. Professional educators have invested a substantial amount of time, effort, and money in research studies, surveys, and experiments for the purpose of providing a scientific basis for good school programs. These efforts have resulted in many common-sense school practices, such as learning democracy by practicing it, learning at different speeds, learning the three R's by using them in meaningful situations, and studying actual problems of living which have meaning for children. The effort on the part of well-organized, noisy minorities to make it appear that a large majority of the people is opposed to modern education has not been successful in communities where the people have been informed about the school program and have had an opportunity to express systematically their satisfaction or dissatisfaction with it. After making a careful study of 69 communities in Illinois, Henderson and Hand report:

> It may be instructive to add that the authors know of no community anywhere in which any of the outside professional trouble makers have "moved in" after a systematic satisfaction-dissatisfaction poll has been conducted and publicly reported. These communities, it would seem, are not regarded as good risks by these professionals.[6]

The enemies of modern education have frequently been given a great deal of assistance by the tendency of educational theorists to engage in either-or thinking and to make it appear that no middle ground exists between two extreme points of view. John Dewey recognized this tendency in one of his later books. "Mankind," wrote Dewey, "likes to think in terms of extreme opposites. It is given to formulating its beliefs in terms of either-or's, between which it recognizes no intermediate possibilities."[7] Some of the difficulties that school systems have encountered in making innovations in school programs have resulted from a lack of understanding on the part of parents and other laymen of what constitutes modern education. Too frequently in the past, modern education has meant to them the proposals of a few extreme radicals rather than the common-sense practices found in modern schools generally. In an effort to sharpen the issues, some educational re-

[6] Kenneth B. Henderson and Harold C. Hand, "To What Extent Is the General Public in Sympathy with the Current Attacks on the Schools?" *Progressive Education*, January 1952, pp. 110–115.
[7] John Dewey, *Experience and Education* (The Macmillan Co., 1938), p. 1.

formers have made little effort to harmonize the real values of the old with the tested and proven values of newer practices. Instead, the theory has been "Do the opposite to what has been done and you will be right."

It has been said that the center of truth in any controversial issue is like the center of anything—somewhere between the two sides. Even in the most modern elementary school the teacher seldom finds it necessary to choose between extremely conservative practices and extremely radical ones; instead, she usually finds it necessary to choose a common-sense middle ground somewhere between the two extremes. This does not mean that the teacher goes back to traditional practices; it means that she goes forward toward common-sense modern practices. The sections that follow are presented for the purpose of showing in specific areas the relationship among common-sense modern practices, traditional practices, and radical proposals.

Discipline

Democracy has as much need for discipline as despotism has—but of a different kind. The discipline in a dictatorship is intended to produce slaves; the discipline in a democracy is intended for free men. Because the traditional school practiced a type of discipline that placed a premium on blind obedience to the commands of the teacher, it does not follow that in the modern school children must be allowed to do as they please. Freedom and self-direction are achieved only gradually as the child learns, through experience and guidance, to substitute self-imposed controls of behavior for adult-imposed control. The development of this type of discipline place more rather than less responsibility on the teacher for intelligent guidance of the child. A balance between freedom and guidance is needed at every stage of the child's growth.

Curriculum organization

Arguments about the experience curriculum versus the subject-matter curriculum frequently leave the impression that the modern school is not concerned with teaching the child to read, write, spell, and use arithmetical processes effectively. The statement that the best way to teach arithmetic is not to teach it at all does not make sense to the average parent or beginning teacher. It is true that many opportunities for learning arithmetic exist in the normal activities of children—that all the learning does not take place during the period set aside for arithmetic in the daily schedule. It is also true that arithmetic has frequently been taught primarily by means of abstract

drill on meaningless material. It does not follow, however, that the direct teaching of arithmetic must be eliminated in the modern school.

The curriculum organization in many modern elementary schools provides for unified activities during a part of the school day and for the direct teaching of subjects during the remainder of the day. What is needed is a balance between these two phases of the instructional program which takes into account the maturity of the learners.

Drill

The newer psychology of learning (explained in the next chapter) regards learning as a growth process rather than an additive process, emphasizes the role of insight and of seeing relationships in the learning process, and supports unitary rather than piecemeal learning. This broader concept of learning has had widespread influence on teaching procedures. Unit teaching, more active participation of pupils in planning learning experiences, and the use of a greater variety of resources for learning may be cited as illustrations of the influence of the broader concept of learning. This does not mean, however, that drill is completely eliminated in modern classrooms. It means that drill is assuming its rightful place in the school program, that it is based on careful diagnosis of individual difficulties, and that pupils are shown the need for drill. It means that important skills are learned through use in meaningful situations whenever possible, and that understanding comes before drill.

Pupil purposes

In the old days pupils were expected to memorize masses of meaningless material on the theory that doing what was difficult and disagreeable improved the mind and strengthened the character. The function of education was the preparation of leaders for church and state, and it was assumed that those hardy youngsters who survived the tedious process of memorizing material set before them without understanding what contributions it made to happiness or effectiveness of living were the ones best prepared for leadership. Today this system seems to most educators to have been well suited to the selection of a few youngsters who could succeed in spite of the type of instruction provided and to the ruthless neglect of all others.

Psychologists have found that pupils learn more rapidly, remember longer, and build more favorable attitudes when they are given an opportunity to become intelligent about their own education, when they participate

actively in setting up objectives for each learning unit, and when they become increasingly self-directing in learning experiences. Such learning has been found to be more effective in developing initiative, originality, and persistence, qualities that are essential in the life of a citizen of a democracy.

This does not mean, however, that all the objectives of education are to be found in the immediate felt needs or purposes of pupils. Certain things must be taught because of the demands of living in the kind of world we now have. The ends of education are determined primarily by the conditions and ideals of society. The modern school therefore selects its objectives in terms of social realities and ideals but makes every effort to utilize pupil purposes in the accomplishment of its objectives. Pupil purposes are therefore the means of education rather than the ends. A great many doubts concerning modern education could be removed if professional educators made it clear that a modern classroom is not one in which children are asked each morning what they want to do that day.

Creative experiences

Elementary schools are giving an increasing amount of attention to developing the creative abilities of children. It is generally recognized that, in a democracy, individuals must develop originality, use initiative, and assume responsibilities. It does not follow, however, that all of the child's experiences either can or should be creative. The need for conforming to group standards cannot be overlooked either in school or in life outside the school. There is a need, therefore, for a balance between experiences that stress individualism and self-expression and those that teach the child to conform to accepted patterns of conduct.

Curriculum planning

Because teachers in the traditional elementary school were expected to teach what had been set out for them by others in textbooks and courses of study without themselves being very much concerned with its appropriateness for the group of children they were teaching, it does not follow that the curriculum of the modern school must be determined on the spot by each teacher and her group of children. Most modern elementary schools find it desirable to work out in advance an agreed-upon scope and sequence, leaving the details to be worked out by the teacher and the pupils in the classroom. Not a rigidly planned curriculum, not a planless curriculum, but continuous

planning by administrators, teachers, pupils, and parents is what is needed. Modern education makes more sense to the general public when the impression is removed that it is a chaotic, planless affair depending upon the impulse of the moment.

Textbooks

Because the single textbook represented the only source of learning material and determined to a great extent the scope of the curriculum in many elementary schools of the past, it does not follow that textbooks have no place in the modern elementary school. A good series of textbooks usually represents the best efforts of competent specialists in elementary education and the services of the editorial staff of the publisher. Good textbooks incorporate the findings of the most recent research in the various phases of elementary education and certainly have much to offer when used wisely. However, textbooks no longer constitute the only learning materials available; sets of supplementary books, library books, pamphlets, magazines, maps, charts, globes, excursions, and many types of audio-visual resources are available to supplement the textbook.

Evaluation of pupil progress

In many elementary schools of the past, paper-and-pencil tests designed to measure academic achievement constituted the principal means of evaluating pupil progress. Since the objectives of the modern elementary school are much broader than those of the traditional school, and since psychologists and measurement experts have developed instruments and procedures for evaluating many phases of pupil growth, evaluation of pupil progress is much more comprehensive than it used to be. It should not be assumed, however, that tests of academic achievement are no longer used. Instead, the modern elementary school makes use of a great variety of instruments and procedures in a program of evaluation which is comprehensive, continuous, and cooperative. (This program is discussed more thoroughly in Chapter 14.)

Reporting to parents

The traditional report card, with its letter grades representing the progress of the pupil in academic subjects, is generally recognized as an inadequate

means of communication between the school and the parent. It does not follow, however, that there is no longer any need for written reports on pupil progress. The modern elementary school uses an improved written report which is frequently supplemented by teacher-parent conferences, informal letters to parents, samples of the pupil's work and home visitation.

Subject matter

The exclusive preoccupation of the traditional elementary school with standardized bodies of subject matter to be learned stimulated a revolt in educational thinking which in some cases reached the extreme of making it appear that subject matter was not important. Teachers in the modern elementary school are as much interested as anyone in seeing that the child acquires useful information which will help him meet problems of living more effectively. Such programs as the experience curriculum and the life-centered or community-centered school constitute no reflection on the value of learning subject matter. Instead, they are intended as programs in which the subject matter learned is related directly to experiences of the child in out-of-school living and is selected in terms of its significance in improving living. Many honest doubts concerning modern education could be removed if educators took more pains to point out that the acquisition of useful knowledge is not neglected and that most children in modern elementary schools are actually achieving a more thorough mastery of the three R's than did the children of the elementary schools of past generations.

The issues listed above and many others can be cited as examples to show that progress in education can be achieved only by finding a common-sense middle ground between extremes. Professional educators are not alone in recognizing such a need. Statesmen have recognized for years that our cherished freedoms can be preserved only by avoiding the dangers of the extreme right and the extreme left.

The common-sense middle-ground course is not an easy one either in education or in politics. The liberal statesman who tries to maintain a balance between the responsibilities of the individual and those of the government will be called a reactionary by extremists on the left and a radical by extremists on the right. The educator who faces the facts realistically and selects the central position will be called a traditionalist by the extremists on the left and an impractical dreamer by the extremists on the right. It is the conviction of the author, however, that better educational opportunities can be obtained for boys and girls by pursuing a sensible middle-ground course than by exclusive devotion to either of the extremes.

Summary

1. There is a need for a re-examination of the purposes of the elementary school in our society and for a reshaping of its program in the light of new conditions of living.

2. The curriculum is comprised of all the experiences of children for which the school assumes responsibility.

3. The problem with which the curriculum-maker is concerned is not merely that of deciding what subjects are to be taught; it is rather a problem of improving living in the school and the community.

4. The program of public education is closely associated with the problem of maintaining a strong and free America.

5. The elementary school as it exists today represents a heritage of more than three centuries of effort on the part of intelligent and courageous men and women in all walks of American life.

6. The story of the American past cannot be fully understood by studying only the careers of statesmen and military leaders; the ideas and accomplishments of leaders in the cause of public education have played a significant part in making our country what it is today.

7. The fact that millions of American children are still being denied the opportunity for the full development of their powers through education represents a failure to live up to our democratic ideals and a tragic waste of our human resources.

8. A brief look at the schools of colonial times supports the contention that school programs tend to reflect the conditions and ideals of the society they serve.

9. Many leaders in early American political life recognized the necessity for universal education as a basis for the success of a democracy.

10. The period of the public-school revival (1837-1876) made elementary education available at public expense to children in all except the southern states, but the schools were still operated on the aristocratic principle of selection and elimination, with little consideration for the democratic concept of educating every child for effective participation in the life of his community, state, and nation.

11. Several factors combined during the period from 1876 to 1929 to make the elementary school a place for learning facts and skills, with little regard for developing desirable social behavior, creative expression, and wholesome attitudes.

12. Much progress has been made since 1929 in bringing about a basic reorganization in the elementary-school program. Important gains have been made in bringing more unity, more reality, and more democracy into the school experiences of children.

COMMON SENSE VS. EXTREMES IN EDUCATION

	Traditional Position	Radical Position	Common-sense Position
Discipline	Complete domination by the teacher	Complete freedom for pupils	A balance between freedom and guidance
Curriculum organization	Separate subjects constitute the whole school program	Eliminate all school subjects	A balance between the direct-teaching and the unified-experience phases
Drill	Abstract drill is the principal method of teaching	Eliminate all drill	Understanding comes before drill. Use in meaningful situations is preferable to abstract, meaningless drill
Pupil purposes	Pupil purposes ignored	Pupil purposes are the ends of education	Pupil purposes are the means of education
Creative experiences	Conformity to adult standards	Cultivation of originality of pupils	A balance between conformity and originality
Curriculum planning	The planned curriculum	The planless curriculum	Continuous planning of the curriculum by administrators, teachers, pupils, and parents
Textbooks	The textbook is the only instructional material	Eliminate textbooks	Textbooks used intelligently plus many other types of instructional material
Evaluation of pupil progress	Competitive marking system based on academic achievement only	Eliminate all testing of academic achievement	Comprehensive, continuous, co-operative evaluation of all phases of pupil growth by use of many instruments and procedures
Reporting to parents	Formal report cards based on academic achievement alone	Eliminate all written reports	Comprehensive written reports dealing with all phases of child growth plus interviews with parents
Subject matter	The subject-centered school	The child-centered school	The life-centered school

13. The elementary school of the future must be more in harmony with the characteristics and needs of children and the realities and ideals of our culture if it is to prepare children to live effectively in the vastly complex life of tomorrow.

14. In the good elementary school of today, the teacher seldom finds it necessary to choose between extreme points of view; a common-sense middle ground can usually be found.

SOME PROBLEMS AND PROJECTS

NOTE. *Lest the instructor, the student, or the in-service teacher become disturbed by the lack of definitive answers to the questions raised below, let us explain that in many cases there are no "right" answers. The problems and projects are intended to stimulate thinking and to help the reader see the relationship between the content of the chapter and actual classroom practice. The reader will find that his answers are based upon his own value system— that is, upon what he conceives to be right and good and true. This in turn depends upon his grasp of the concept of democratic education and his knowledge of how children grow and develop. It is hoped that this volume will aid the teacher in building a sound value system so that his "answers" will result in better education for American schools.*

1. Here are some criticisms of the schools which have appeared in the literature during the past year:

    a. Although the schools have made attempts to provide for individual differences, these attempts have by and large concentrated on low and average achievers, to the neglect of the bright.

    b. There are many nonessentials in the school curriculum which must be weeded out to make room for more substantial content.

    c. Schools have overemphasized adjustment to the group and group activities to the neglect of individualism, with the result that there has been no strong antidote to the pressures for undue conformity which exist in our society.

    d. Schools have not provided a bulwark against the anti-intellectualism said to prevail in our society.

e. *Teachers are often poorly trained and inadequately prepared in the subject matter they must teach.*

Working as individuals or in small groups, develop an observation schedule designed to study the criticisms listed above. That is, list under each of the above criticisms the kinds of evidence you would look for to prove or disprove the criticism. You might then observe in a classroom, noting whether the program needs strengthening with respect to these five criticisms.

Following are questions that might help you to evaluate Criticism a. These questions might be used in observing either a reading lesson or an arithmetic lesson. If possible, ask the teacher in advance to identify the fast and slow learners. Questions to ask are:

I. Does the teacher teach the whole class at the same time, does she group children for instruction, or does she attempt to individualize the instruction?

II. How much time is devoted to the slow learners as compared with the fast? Can you find out from the teacher if practice varies from day to day?

III. Do the bright children do extra work on projects or otherwise engage in activities that may be interesting, but appear to be only at the same level of difficulty as the grade you are observing? Or do these pupils use texts or references and receive instruction on a more advanced grade level than the rest of the class? By how much are they advanced in the materials they use? Are some using books for the next higher grade? two grades higher?

It will be interesting for you to save your questions and observation notes until the end of the semester, to repeat this assignment at that time, and to compare the kinds of things you think are important now and later.

2. Miss A, from Milton State Teachers College, goes out to visit one of the near-by public schools. She carries in her mind a mental check list of the characteristics of a good school. She notes with approval that in the fifth grade she is visiting there are movable seats; that the daily plans, which are written on the board, are in terms of large subject-matter blocks; that the class is not called the Fifth Grade but the Elevens. She is pleased to see that a good supply of reference material is on hand, and that there is evidence of considerable committee work going on in the classroom. She sits down to observe a planning session in the social studies.

TEACHER: Boys and girls, we have finished with our study of the Ohio River Valley. Does anyone have a suggestion as to what we might study next?

PUPIL: I want to study about California and how they found gold there.

TEACHER: That would be very worth while, but I don't think we're quite ready for California yet.

PUPIL: I'd like to find out more about the Southwest and the Indians and especially Geronimo. I saw a good movie about that.

TEACHER: Yes, I believe a study of Indians would be very interesting, but you studied Indians in third grade; that's third grade work.

PUPIL: Why don't we study Korea? That's important and we've never studied it.

TEACHER: Korea is important, and perhaps later on we'll study it.

PUPIL: Well, what's after the Ohio River? Where did the pioneers go next? Maybe that's what we ought to study.

TEACHER: A very logical suggestion, Robert. That's good thinking, isn't it, boys and girls? The next section to be settled was the prairie area. I'm sure our study of it will be very interesting. Now what committees will be needed?

At the end of the lesson, Miss A closed her observation book, pleased that she had tucked safely away a record of good educational practice.

Do you agree with Miss A's evaluation of her observation? Was the teacher really democratic or was she simply going through the outward motions of teacher-pupil planning with her mind already made up as to what the children should study next? Was her opening question a good one in the first place?

3. Is there danger in such mental check lists as Miss A's? Why is it not safe to judge the worth of a school program in terms of certain external signs such as kind of furniture or committee work? What kinds of things might you look for in a school with screwed-down desks and poor equipment that might indicate a good educational program in spite of the externals?

SELECTED READINGS

ALLEN, FREDERICK LEWIS, The Big Change (Harper & Brothers, 1952). This book deals with major changes that took place in American life between 1900 and 1950. The chapters on "The Revolt of the American Conscience," "The Great Depression," and "The Spirit of the Times" are particularly useful.

BECK, ROBERT H., COOK, WALTER W., and KEARNEY, NOLAN C., Curriculum in the Modern Elementary School (Prentice-Hall, Inc., 1953), Chapter 1 deals with the historical background of the elementary-school curriculum.

CAMPBELL, ROALD F., and RAMSEYER, JOHN A., The Dynamics of School-Community Relations (Allyn & Bacon, 1955). Chapter 1 presents some major criticisms of modern schools; the remaining chapters suggest ways of working with citizens for better understanding of school problems.

COLLINGS, ELLSWORTH, An Experiment with a Project Curriculum (The Mac-

millan Co., 1923). This book describes in detail the elementary-school program based in the interests and normal activities of children.

DRAKE, WILLIAM E., *The American School in Transition* (Prentice-Hall, Inc., 1955). This book shows how the school has responded to demands of the culture at various periods in its development and identifies major issues regarding public education.

HERRICK, VIRGIL E., GOODLAD, JOHN I., ESTVAN, FRANK J., and EBERMAN, PAUL W., *The Elementary School* (Prentice-Hall, Inc., 1956). Chapter 1 presents generalizations about the elementary school of today; Chapter 2 traces the evolution of the elementary school in this country.

KNIGHT, EDGAR W., *Education in the United States* (3rd rev. ed., Ginn & Co., 1951). This book traces the development of public education in this country from colonial times through the 1940's.

OTTO, HENRY J., FLOYD, HAZEL, and ROUSE, MARGARET, *Principles of Elementary Education* (rev. ed., Rinehart & Co., 1955). Chapter 16 characterizes the elementary school of today.

REISNER, EDWARD H., *The Evolution of the Common School* (The Macmillan Co., 1935). Pages 422–432 explain how the common school program became crystallized "in the grip of the machine."

RUSSELL, J. D., and JUDD, C. H., *The American Educational System* (Houghton Mifflin Co., 1940). Chapter 2 contains valuable information about the European antecedents of the elementary school; Chapter 12 traces its development in America.

SAYLOR, J. GALEN, and ALEXANDER, WILLIAM M., *Curriculum Planning* (Rinehart & Co., 1954). Chapter 1 explains the modern concept of curriculum and presents some basic issues in curriculum-planning.

SELECTED FILMS

Design of American Public Education. A two-reel sound film showing the organization and structure of American public education; contrasts central control of education with democratic control, and emphasizes the importance of the teacher. McGraw-Hill Films.

Horace Mann. A two-reel sound film presenting important episodes in the life of the "father of the common schools." Encyclopaedia Britannica Films.

Education in America: The Seventeenth and Eighteenth Centuries. A one and a half-reel sound film showing the early beginnings of education in colonial America: early New England school laws, Dame Schools, Latin Grammar Schools, church schools, and pauper schools. Coronet Films.

Education in America: The Nineteenth Century. A one and a half-reel sound film tracing the development of the free public school systems from the Northwest Ordinance to 1900: the district system, tax support and state control, textbooks, compulsory attendance, and teacher training. Coronet Films.

Education in America: Twentieth-Century Developments. A one and a half-reel sound film showing the effects of the industrial revolution on education; the influence of Herbart, Binet, Dewey, Thorndike, and others; the depression, federal aid, and the recent Supreme Court decision. Coronet Films.

CHAPTER

2

The Child and the Curriculum

The changes that occur with age have always fascinated parents, teachers, and scientists. An understanding of these changes and of the influences that produce them has become an indispensable part of the preparation of all who work with children.—WILLARD C. OLSON

☐ MANY SIGNIFICANT changes have taken place in the elementary-school curriculum since the turn of the century. An important factor in bringing these changes about has been a better understanding of the nature of the learning process and of the characteristics and needs of children. An understanding of the psychological foundations of education is an indispensable phase of the preparation of all who expect to participate in curriculum improvement.

What is learning? How is it related to growth and development? How can the teacher know when the child has learned? What are the general concepts of learning? How are the facts about learning related to curriculum planning? Why is it important for teachers to understand children? What should teachers know about children? How can the school foster the mental health of children? The professional competence of the teacher is determined to a large extent by her answers to these questions.

The Work of the Teacher

Teaching is not only one of the most important of the professions from the standpoint of human welfare; it is also, when properly understood, one of the most technical and difficult. The teacher is not merely a person who assigns lessons to chil-

dren and checks to see whether the lessons have been learned; the teacher is a builder of human lives and a trustee of the cultural heritage which this generation holds for the enrichment of the next.

Everyone expects the engineer to know mathematics and mechanics, because insufficient knowledge of these basic disciplines might result in a defective building or bridge and the loss of money or of property. The surgeon must know anatomy and physiology because human lives depend upon it. Few people realize, however, the extent to which superficial knowledge of human growth and learning, applied in classrooms from day to day, results in lost opportunities, wasted lives, warped personalities, discouragement, delinquency, crime, and unhappiness. The strong faith that our people apparently have in public education, and the failure, in many communities, to see to it that our schools are staffed with professionally prepared teachers constitutes one of the riddles of modern times.

Concepts of Learning

Elementary schools exist for the purpose of assisting children in learning those things that are essential for effective living in the modern world. The elementary school is expected to provide an environment in which many different kinds of learning will take place. Types of learning that must be taken into consideration in curriculum planning have been identified as follows: motor learning, mental association, conditioning, trial and error, generalization, thinking, and problem-solving.[1] Because children in the elementary school vary widely in potential for learning, it is necessary to provide a great variety of learning activities to meet the needs of the more gifted children as well as of those with limited capacity for learning.

The study of human behavior, like medicine, began with mysticism and spiritualism. Psychology was once known as the science of the soul. Behavior was explained in terms of good or bad spirits which were supposed to inhabit the blood vessels. Later, behavior was explained in terms of bodily structure, especially the shape of the cranium. Still later, psychology was devoted to a study of the mind, or mental processes. A textbook on psychology contained chapters on sensations, concepts, attention, apperception, memory, imagination, and reasoning. In recent years there has been a trend toward studying behavior directly without paying much attention to theoretical discussions of the mind or mental processes. The evolution of the study of human behavior is illustrated by the flippant remark that psychology first lost its soul, then lost its body, and now has lost its mind.

[1] George A. Beauchamp, *Planning the Elementary School Curriculum* (Allyn & Bacon, 1956), pp. 115–133.

Space is not available in this chapter to review the various theories of learning or schools of psychology; that constitutes a major field of study itself.[2] Teacher-education programs usually include a thorough course in the psychology of learning, and many public school systems provide in-service education that enables teachers to gain a clearer understanding of the learning process. It is our purpose here merely to characterize briefly some of the concepts of learning that have influenced the development of the elementary-school curriculum.

Learning as the acquisition of knowledge and skills

Learning has for many years been regarded as identical with knowing. But teachers who regard learning merely as the acquisition of knowledge and skills give too little consideration to the use children make of knowledge and skills in the solution of actual problems of living. For example, the teacher may be so concerned with the child's ability to name the bones of the body and trace the circulation of the blood that she fails to provide experiences through which the child learns to live more healthfully from day to day. The teacher may be so intent on teaching the rules of grammar and the conjugation of verbs that she overlooks opportunities for helping children learn to speak and write more effectively in actual situations that require writing and speaking. Thus, learning may come to be divorced from living, may be regarded as something that comes primarily from textbooks, and may have little relation to the problems and interests of children. The proof of learning, according to this concept, is the ability to recite back to the teacher the material that has been memorized rather than the changes that have taken place in the behavior of the pupil.

This concept of learning influenced every phase of the traditional elementary-school program. Rows of seats screwed to the floor, teachers trained in the presentation of subject matter in a limited field, motivation based on rewards and punishment, examinations designed to test memory of facts, annual promotions based on minimum grade standards—in short, the whole mechanized procedure of the traditional elementary school flowed naturally from this narrow, static concept of learning.

Learning as the modification of behavior

There has been increasing acceptance in recent years of the view that learning is the modification of behavior that comes about through interaction

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[2] See E. R. Hilgard, *Theories of Learning* (Appleton-Century-Crofts, 1948).

with the environment. The acquisition of knowledge and skills is involved in learning, but this represents only a part of the process. Learning, in the broader sense, takes place only when an individual has an experience that influences his behavior and makes him a different person.

This concept takes into account the influence of more factors in the learning environment than did the learning-is-knowledge concept. That the child may learn from the textbook is recognized, but he may also learn from another pupil, from something he sees on a trip, or from something that happens to him at home. Learning is a function of the total environment of the child.

This concept also takes into account the effects of the learning experience upon personality or character. If the child has really learned, he will behave in a different manner in the future. This is the everyday, common-sense meaning of the word *learn*. When the mother tells her child, "You will have to learn not to put your finger on a hot stove," she does not mean that the child should get a book and memorize the sentence "Do not put finger on hot stove." She means, rather, that the child should get so he does not put his finger on a hot stove. The proof of learning is behavior. Kilpatrick makes this point very clearly:

> Our problem of learning is thus fundamentally changed from what most teachers think. Instead of thinking of subject matter that it get learned, or even perhaps of learning at all that it should go on, we must think first of living, of the worthy quality of living and how we may somehow encourage it, how we who are in charge may so condition present living that it will sprout forth that finer living. For our children will learn what they live and it is the quality of the living that counts.[3]

The worth of the teacher is determined not alone by what the child knows but also by what the child does. What Johnny has done in arithmetic is important, but what arithmetic has done to Johnny is still more important. If he has learned arithmetic and at the same time learned to like school, to do his own work, to continue with a task until it is finished, and to do his work accurately and neatly—in short, if he has developed desirable personality traits as a result of the way in which he learned arithmetic—then his experience with arithmetic has been successful. The learning of subject matter influences personality development.

Newer approaches to learning theory

The past decade has seen tremendous advances in learning theory which will eventually have an important impact upon elementary education. Many

[3] William H. Kilpatrick, in *Democracy and the Curriculum* (Yearbook III, John Dewey Society, Appleton Century-Crofts, 1939), p. 378.

of them have come about as a result of experimentation upon animals. These experiments are typically designed to test the operation of learning principles in simple situations under rigorously controlled conditions impossible to achieve at the human level. Although psychologists recognize that human learning is infinitely more complex than rat learning, nevertheless work on lower mammals can contribute to our knowledge of human learning.

As a result of the work of learning theorists, we are beginning to have a much clearer picture of what learning is and how modification of behavior through learning occurs. Consider Susan's behavior during a reading lesson. As the casual observer sees it, Susan gets stuck on a word during the reading lesson, the teacher helps Susan reads the word correctly, and a few minutes later, when she again encounters the word, Susan repeats it correctly. She has "learned" it, the visitor notes.

But this simple act of successful learning can also be analyzed so that we can identify four fundamentals of the learning process. According to Dollard and Miller,[4] in order for learning to occur, four elements must be present:

1. *The child must want something.* There must be a *drive* or a *need* to learn. This drive or need is the result of tension in the organism which the organism seeks to reduce. Susan *wants* to be able to read the word—perhaps to please the teacher, perhaps to do well before her classmates, perhaps because her parents value reading. The teacher notes signs of tension in Susan; when she is stuck on a word, Susan twists the pages of her book and moves restlessly in her seat.

2. *The child must notice something.* This is the cue. In Susan's case the teacher helps Susan "notice" the right cues by pointing out the similarity between the word Susan is stuck on and a word she already knows.

3. *The child must do something.* Susan must make a *response* in order to learn. She may make several responses in trial-and-error fashion, with the teacher correcting the wrong responses.

4. *The child must get something.* Reward must follow the response. When Susan called the word correctly, the teacher's exclamation, "Right," served as a reward and Susan's tension, which arose when she first encountered the new word, was reduced.

In the future each time Susan reads the word correctly and reward is forthcoming, the tendency to make that same response is strengthened. The reward eventually may be her own pleasure in being able to read smoothly. This type of learning we call learning by reinforcement, or effect learning.

Learning theorists are also making an important contribution to a new definition of conditioning. The analysis of the four fundamentals of learning presented above explains how the child acquires new skills and new knowl-

[4] *Personality and Psychotherapy* (McGraw-Hill, 1950).

edge. But children also learn new needs or drives; they learn to want acceptance by their peers; they learn to like social studies or hate arithmetic; they learn to work for good grades; they learn to like or to dislike school. How do they learn these emotional attitudes? The concept of conditioning helps us to understand the process.

Suppose that Susan's teacher, instead of helping her with the difficult word, had said, "Susie, you're being very stupid. You've had that word before. Now don't be lazy—try to sound it out for yourself." Now tension within Susan mounts. She is afraid of the teacher's wrath. She looks again at the word but cannot see it. The tension becomes intolerable and she bursts into tears.

If Susan is again reprimanded and experiences fear when she encounters a new word, she may learn to associate "fear" and "new words." In other words, she may be "conditioned" so that seeing a new word will make her afraid. This fear may be so strong that it will stand in the way of her learning to read. We may then say that Susan has an emotional block to reading. Through this same process of presenting two cues or stimuli to the child at the same time, we can also build favorable emotional attitudes toward learning.

As learning theorists spell out principles of learning in more detail for us, the teacher can more effectively guide the learning process. As a teacher of the skills, she will be on the alert to note which cues children are picking up; sometimes she may ask children to do their thinking out loud for her so that she can discover those instances where her pupils are paying attention to the wrong cues. She will provide drill *with reinforcement* so that the proper responses will be strengthened in her pupils. And she will be careful to make first experiences with new learnings rewarding to children so that desirable emotional attitudes can be established.

Knowing More about Children

It is easy to underestimate how difficult it is for an adult to understand a child. Having once been a child, the adult usually assumes that he can recall accurately the language, concepts, and problems of childhood. This is not a valid assumption. Even if the adult could remember the experiences of his own childhood accurately, they would not throw much light on the problems of children growing up in the vastly different environment of today.

An author of outstanding books for children has found that the only way to make certain that the books reflect the point of view of children is to read the manuscript to children and note their reactions. For example, one manuscript read to a group of children contained the statement, "The dog said, 'Bow wow.'" A child objected immediately, saying, "The dog does

not say, 'Bow wow'; he says, 'Woof woof.'" Adults have for centuries been saying to children, "The dog says, 'Bow wow.'" It was only by going to children directly that adults learned that children do not understand it that way. The incident points up the fact that we have been looking everywhere for information on how to deal with children except to children themselves.

Our society is only beginning to see the importance of understanding children and of providing better educational opportunities for them. Human infants are more helpless at birth and have more to learn than any other form of animal life. Anthropologists say that many "racial" characteristics which we consider to be innate are really learned at an early age by all members of the group. These facts make it clear that the future of our country depends upon a better understanding of children. With each generation of children we are given a new opportunity to build a better, more tolerant, and more humane society than the one we now have. We can take full advantage of this opportunity by staffing our elementary schools with professionally prepared teachers, with teachers who understand the nature of human growth and development and who know how to use instruments and procedures for deriving and using information about the characteristics and needs of children.

In the better elementary schools throughout the country, teachers, principals, and parents are working cooperatively in child-study programs. Prall and Cushman report that more than one third of the combined activity of the schools associated with their study of in-service education of teachers was focused upon understanding child behavior.[5] These school people believe that curriculum improvement depends upon a better understanding of children.

The real proof of the professional status of an elementary-school staff lies in the development of a school program in harmony with the characteristics and needs of children. The staff of a good elementary school examines current practices in the light of the following questions:

1. Is it the general policy of the school to initiate instruction at the level where the child is?

2. Do teachers understand and implement the philosophy of growth rather than the philosophy of minimum essentials?

3. Are efforts made to determine the physical, mental, emotional, and social status of all pupils?

4. Has the school staff developed a systematic method of collecting and using pertinent data relating to the needs of children?

5. Is it the policy of the school to provide individual guidance instead of escorting all pupils in a given grade through the same materials?

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[5] C. E. Prall and C. L. Cushman, *Teacher Education In-Service* (American Council on Education, 1944), pp. 147-161.

6. Is nonpromotion used in wholesale fashion as an excuse for failure to provide for individual differences?

7. Is double promotion used with bright pupils as an excuse for failure to provide an enriched curriculum?

8. Does the type of evaluation of pupil progress encourage meaningful learning rather than mere memorization?

9. Does the system of reporting to parents reflect the philosophy of growth rather than the philosophy of grade standards?

10. Is the same teacher allowed to stay with a group of children more than one school term in order to understand their needs and characteristics better?

What does it mean to understand a child? What do we know about children? How can teachers learn to understand children? How can teachers guide children so that they will become healthy, happy, and useful citizens? These questions must be faced by teachers who work with children if they are to fulfill their obligation to the next generation. The references listed at the end of this chapter will help to answer some of these questions. In this section it will be possible merely to indicate some of the characteristics of teachers who understand children.

Understanding the philosophy of growth

That education is a process of continuous growth, that all children are capable of making gains toward desirable personal and social goals, that children differ in rates of growth, and that all children will not reach the same level of achievement in a given time—these are some of the concepts that make up the educational philosophy of growth. Olson states this philosophy as follows: "Each child is to be assisted in growing according to his natural design without deprivation or forcing in an environment and by a process which also supplies a social direction to his achievement." [6] Teachers who understand children know that each grows at his own rate, that it is futile to try to force a child to keep up with those who mature earlier, and that the child who learns rapidly should not be deprived of opportunities for an enriched experience.

Understanding that behavior is learned

Children *learn* to behave in a certain way just as they learn to read, to count, or to ride a bicycle. Behavior traits are not inherited; they are learned.

[6] Willard C. Olson, *Child Development* (D. C. Heath & Co., 1949), p. 380.

through interaction with the environment. The teacher who understands children will look for the causes of specific behavior in the past experiences of the child, in the conditions existing in his home, and in his goals or expectations for the future. On the basis of this information the teacher will provide experiences for him which will make it possible for him to gain satisfaction, success, and approval through acceptable behavior.

The experience of those who have worked with delinquent children emphasizes the fact that behavior is learned. They deal with many children who have grown up in an environment that has made it easy for them to learn to steal, lie, and cheat and has provided little incentive for being honest, truthful, and fair. Punishment for misbehavior in such circumstances may be necessary as a temporary measure, but the real solution is usually found in a slow process of re-education in an environment that places a premium on acceptable behavior.

The elementary school represents a special environment—one that is deliberately arranged for the development of skills for wholesome living. The teacher who understands children looks in the environment for the causes of unacceptable behavior and tries to provide experiences for the child to help him develop acceptable behavior.

Belief in the inherent worth of every child

The problem of understanding children cannot be fully solved apart from the ethical values of our society. Our system of free public education is based upon the fundamental American ideal that every child, regardless of race, color, creed, physical condition, native intelligence, or social position, is entitled to the full development of his talents through education. An emotional acceptance of every child for his potential worth to society, regardless of his present ability or behavior, is an obligation of every teacher in our free public schools. Teachers who understand children realize that it is necessary to take the child where he is and to provide experiences that will help him to make the most of his talents, whether they be many or few.

An understanding of facts and principles relating to human growth and development

Scientific facts and principles that explain human growth and development are derived from many disciplines, including biology, physiology, sociology, anthropology, psychology, pediatrics, psychiatry, and education. The teacher does not need expert technical knowledge in all of these fields, but

a working knowledge of the basic principles of each is essential. That is why a teacher who has specialized in one or two academic fields at the expense of a broad liberal education is out of place in an elementary school. The preparation of the teacher should include provision for bringing together the facts and principles of human development gained from study in the fields listed above into a composite picture and for making interpretations in terms of the work the teacher is expected to do.

Skill in the use of evaluation instruments and procedures

One phase of the professional work of the physician consists of his skill in using instruments and procedures for getting information about the condition of the patient. Such information is necessary as a basis for making a diagnosis and outlining a course of treatment. The teacher as a professional person needs comparable skills. She needs to be skilled in observing and recording behavior, in interpreting data, in conducting an interview with a child or a parent, in constructing a sociogram, in making an anecdotal record, in building tests that reveal understanding as well as memory of facts, in keeping a cumulative record, and in administering standardized tests.

Enthusiasm for teaching and working with children

No teacher can do her best work unless she feels that she is engaged in the most important work in the world, unless she enjoys working with children and wants to do the best possible job of guiding them. The teacher must be growing in her personal life, experimenting, and working with new problems and hobbies. A teacher who is insecure in her own personal life, who is unhappy with the work she is doing, and who is impatient with children cannot do a good job of understanding children and guiding their development.

Mental Health

The complexity of living in these times places severe strains on adults and children alike. These tensions result in an increasing amount of mental illness, which represents tremendous human waste and suffering. The number of persons committed to mental hospitals has been increasing rapidly in recent years, an increase of 39 per cent between 1937 and 1946. In 1946, almost half of the hospital beds in the nation were occupied by mental patients, and it is estmatied that more people are hospitalized for mental

and nervous disorders than for cancer, infantile paralysis, and tuberculosis combined. It is likely that one out of every twelve persons will be hospitalized for a mental disorder in the course of his lifetime.[7] In 1945, the cost to the nation for maintaining psychiatric hospitals totaled 204 million dollars. However, the statistics on serious mental illness give only a part of the picture. Countless individuals who will never be hospitalized or treated for mental illness will live their entire lives at less than normal efficiency because of tensions, frustrations, abnormal fears, and other personality defects.

These conditions offer a serious challenge to the elementary school. Childhood is recognized as the period of greatest opportunity for building sound mental and emotional health, but the elementary school has placed the major emphasis on academic achievement and has—until recently, at least—given but little attention to the mental health aspects of instructional practices.

Mental health is not a problem that can be delegated to the school psychologist or psychiatrist. Because all areas of child development are interrelated there cannot be one aspect of the school program that deals exclusively with the child's physical health, another with his mental health, and still another with his academic progress. The elements that foster mental health must be built into the whole structure of the school program.

What is mental health?

Mental health means more than merely the absence of serious mental illness. It connotes the ability of the individual to live with himself and other human beings with a maximum of happiness, usefulness, and security. Mental health does not mean such rigid control over the emotions that the individual does not show his feelings. It means the ability to accept one's limitations and make the most of one's talents along with a reasonable conformity to conditions in the environment that cannot be changed. The broader concept of learning, which takes into account what the child is becoming as a total personality rather than merely what he knows about school subjects, has focused more attention on mental health in curriculum planning.

Everyone who is in any way responsible for influencing the growth and development of children must be concerned about the factors that foster mental health. Many teachers lack adequate preparation in this area. They are confused by what they believe to be the demands of mental health on the one hand and the expectations of school authorities on the other, and they therefore do very little about the problem.

[7] Louis Kaplan and Denis Baron, *Mental Hygiene and Life* (Harper & Brothers, 1952), pp. 10–11.

The common-sense, middle-ground view on this problem is that a proper regard for the mental health of the child does not mean that he must always be shielded from the unpleasant aspects of life, such as fear, hate, competition, failure, and the necessity for conforming to the authority of others. Every person must experience these situations because of the kind of world in which he is living. Some learn to meet them gracefully and take them in stride; others begin to make excuses, feel sorry for themselves, are easily offended, and make themselves and others unhappy. What causes this difference? The answer seems to be that these experiences become hazards to mental health only to the individual who failed in childhood to learn how to deal with them successfully.

Since no child can avoid contact with these hazards, just as he cannot entirely avoid contact with communicable diseases, the best that parents and teachers can do is to see that he does not have a steady diet of failure, competition, fear, hate, or arbitrary authority. If these things come to him in small doses while he is still under the sympathetic guidance of parents and teachers, he will learn to meet them and not be overcome by them. To learn gradually to stand on his own feet and meet competition is good for a child; to be subjected continually to competition that is too strong for him and never allows him to succeed leads to frustration.

The development of a reasoned attitude toward authority is an essential part of growing up emotionally; to be deprived of any opportunity to make decisions and to act on his own initiative retards his growth toward maturity. We look with contempt upon the adult who never stands up for his rights, who always defers to those in authority even on the most insignificant matters. At the other extreme, we look upon the adult who is in constant and violent rebellion against those in authority as antisocial and have him committed to a penal institution.

Meeting the basic needs of children

The mental health emphasis in instructional practices is concerned primarily with understanding the basic personality needs of children and with helping to meet these needs. The following list of basic needs of children is by no means inclusive. Almost every reader will have a few items of his own to add to it. The list given here merely illustrates the needs approach to mental health.

BIOLOGICAL NEEDS. Biological factors of growth and development have important implications for the mental health of the child. As the child grows from infancy to adolescence, he is confronted with the need for adjusting to adult expectations in regard to eating, cleanliness, and muscular activity. He

needs help in accepting the reality of his personal appearance, in developing muscular coordination, and in making an adequate adjustment to developing sex drives.

Most teachers are aware of the necessity for regular physical examinations of pupils, for cleanliness, light, heat, and play space. They are aware also of the importance of good nutrition, the need for a proper rhythm of rest and activity, the influence of good health on the child's ability to learn, and the effects of physical deformities on the personality. Biological factors that have implications for mental health but are not so well understood include differences among children in energy output, differences in body build, and differences in rates of physical growth.[8]

The curriculum of the modern elementary school provides for meeting the biological needs of children through the program of physical education, through the program of health instruction, and through planning activities in the light of physical abilities of children at various age levels.

THE NEED TO ACHIEVE STATUS IN CHANGING SOCIAL GROUPS. In the early years of his life the child is highly self-centered. The process of growing up involves identifying himself with peer groups, gaining group acceptance, and contributing to group enterprises. Before he starts going to school, the child's group is relatively stable, consisting of the members of his own family and a few neighborhood playmates. When he begins his schooling, one of the most difficult tasks he faces is adjusting to a much larger group, a group consisting primarily of strangers. As he continues in the elementary school he is confronted with the need for adjusting to a shifting peer code of behavior, for resolving conflicts between the code of his parents and that of the peer group to which he belongs, and for adjusting more and more to adult standards of behavior.

The curriculum of the elementary school is the instrumentality through which the child grows into our democratic culture. The elementary school is both a product of the culture and the workshop in which the growing child learns the ways of democratic living. In the better elementary schools, education is recognized as a social process and the curriculum is developed in terms of the social needs of growing children.

The child is not to be regarded as a *candidate* for membership in the culture; he already is a member and is entitled to his share of the happiness that comes from participation in the life of the group. Teachers must recognize their responsibility for helping children acquire the social skills needed for getting along with others and for becoming effective group members.

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[8] For a more detailed discussion of the relation of biological factors to the problem of mental health, see Bernice Neugarten, "Body Processes Help to Determine Behavior and Development," in Fostering Mental Health in our Schools (Association for Supervision and Curriculum Development), Chapter 4.

These skills, like others, are learned through meaningful experiences. The practice of democratic skills in the classroom provides the basis for effective citizenship in the wider groups of the community, state, and nation.

But care must be taken that social skills are not learned at the expense of individualism. One of the criticisms of modern schools is that they concern themselves too much with group adjustment, and provide no antidote to the pressures for conformity in our society. Sometimes this is done unwittingly in classrooms where children have too many opportunities to criticize one another's reports, pictures, and performances. For example, a child gives an oral report and then must wait for comments from the class. The class has been taught that they must be polite and considerate, so the first critic prefaces his remarks with, "That was a good report, Jimmy, but——" and then lets fly with the criticism. Some children learn from experiences such as these that the way to avoid caustic comment is to confine oneself to a rather narrow range of behaviors, that it is dangerous to be different (i.e., original and creative), and that it is safer to go along with what the group thinks is acceptable. Occasionally, parents report that their child has refused to include an interesting object or piece of information in his report because "The other kids won't like it," "The other kids will think it's funny if I bring in extra things," or "We didn't vote to do that." If criticism is needed, the teacher should give it in a kindly, constructive way. When the group is used continually to approve or disapprove the actions of other children too much concern for group opinion may develop and overconformity result.

Too many group projects also kill individualism. It is true that children learn social skills by practicing them, but group projects should be limited to such activities as plays and necessary committee work which, because of their nature, call for this kind of activity. Designing a map, constructing a story, working on an experiment may occasionally be done with no loss to creativity by two or three close friends who stimulate one another intellectually, but too often in a group project the incentive to be creative is killed. Furthermore, since everyone in the group, even the slacker, will receive the same credit for the job, there is little incentive to put forth one's best effort and a desirable achievement drive may be weakened.

THE NEED TO GROW GRADUALLY FROM DEPENDENCE TO INDEPENDENCE. Perhaps the most significant single change in the behavior pattern of the individual as he matures is the growth and transition from excessive dependence upon adults to independence. Parents and teachers who are sensitive to the biological and academic needs of children frequently overlook almost completely their social needs. The child needs considerable adult guidance in learning to bridge the gap between dependence, which is expected more characteristic of young children, and independence, which is expected more

and more as the child grows up. One cannot develop self-direction in children merely by "taking the lid off" and leaving them to do as they please.

The process of growing up, of becoming increasingly independent of adult control, is a long and gradual one; it requires years of growing, experimenting, and guidance. For the five-year-old it is a matter primarily of learning to make decisions, under wise adult guidance, concerning immediate problems, such as sharing possessions, observing safety rules, and taking responsibility for caring for toys and articles of clothing. As the child grows older, he is expected to develop increasing ability to do long-range planning.

Teaching that takes into account the child's need for becoming increasingly independent and self-directing provides experiences in identifying problems, planning to solve problems, gathering information, making decisions, acting upon decisions, and evaluating outcomes. The function of the teacher in this process is that of a guide and a resource person. As the child grows in his ability to make decisions, the direction of the teacher is gradually decreased. The teacher always provides enough guidance to give pupils a sense of security but not enough to discourage initiative.

THE NEED FOR SECURITY AND SATISFACTION. Many children lack security in life outside the school. The increasing number of broken homes and the tendency of families to move from one place to another result in a large number of children who have nothing that can give them a feeling of security. The school has a particular responsibility to children from such families. The child needs to feel that he is surrounded by adults upon whom he can depend, that he has a reasonable chance to succeed at least a part of the time, and that he can predict fairly well what will be expected of him.

One of the fundamental human needs is a feeling of confidence in oneself, a recognition of personal worth, and a knowledge that one is recognized by others as a worth-while person. Children who grow up without the opportunity to develop self-confidence, who are continually criticized for inability to meet adult standards, who are not allowed to develop skills in line with their abilities and special talents, lose confidence in themselves and soon develop antisocial behavior traits. Negativism, attention-getting devices, and bullying are frequently the result of failure to find ways of obtaining security and satisfaction through acceptable types of behavior. The adult who is boastful, who is always promoting himself, is one who lacks personal security and therefore feels that he must call attention to his own abilities and achievements or they will go unnoticed by others.

The need for security and satisfaction is met in modern elementary schools through helping each child develop efficiency in the use of such important skills as reading, writing, using numbers, and speaking in accordance with his abilities; through discovering special needs and interests; through providing opportunities for the development of social skills in group

situations; through supplying understanding and assistance to atypical children; through using praise and criticism discriminatingly; and through developing a classroom environment for happy, cooperative living.

THE NEED FOR GETTING AND GIVING AFFECTION. Children need to grow up in home and school in an environment of sincere affection. They need to be loved and appreciated by those who are most important to them. Overdoses of affection, overprotection, and a possessive parental attitude are hazards to the mental health of children, but every child needs at least one adult who has an interest in him, who understands his problems, who loves him, not because he is good or beautiful or bright but because he is himself. As the child grows up, he also needs to learn to give affection, to form friendships, and later to build a strong bond of affection with a possible marriage partner.

The elementary school should be staffed with teachers who understand the need that children have for getting and giving affection, who are genuinely fond of children, and who can accept every child emotionally not only for what he is but for what he may become under wise guidance.

THE NEED FOR DEVELOPING APPROPRIATE COMMUNICATION SKILLS. The needs of children cannot be understood apart from the environment in which they grow up. Success and recognition in school still depend upon the development of skills and concepts in reading, listening, oral expression, and written expression. If the child fails to make satisfactory progress in these skills, social and emotional maladjustment soon follow. The relationship of these skills to the mental health of the school child is discussed in detail in Chapter 8. Here it is sufficient to point out that emphasis on the mental health of a child is as integral a part of instructional practices in the language arts as it is in all areas of the curriculum. Failure to understand normal growth patterns of children and failure to develop language-arts programs in terms of developmental tasks have caused language to become a hazard to the mental health of children rather than a means to their wholesome development.

THE NEED TO LEARN TO FACE REALITY. Children need to learn to face reality, to understand their own strengths and weaknesses, to build on their innate strengths, and to accept situations that cannot be changed. The well-adjusted person is not the one who always succeeds at everything but the one who is content to see others excel in some things while he excels in others. One of the leading causes of frustration and nervous tension in adults as well as children is failure to adjust one's aspirations to one's talents. The child who is upset whenever the least thing goes wrong, who cannot bear to see others succeed where he has failed, is as much in need of guidance as the child who is having difficulty in learning to add or subtract.

One phase of growing up is learning to face reality. The program of the

modern elementary school provides many opportunities for the teacher and the pupil to work together in learning to face reality, to understand and accept the facts of different abilities, different physical features, and different achievements. It provides opportunities to learn that failure in little things provides an opportunity to learn from mistakes and to correct errors.

The work of the teacher is frequently hindered by parents who have ambitions for the child which do not correspond to his abilities or interests. This situation points up the need for a closer working relationship between teachers and parents in helping the child to learn to face reality. Parents and teachers need to understand that they must work in harmony with each child's developmental needs rather than formulate a plan for the child and then try to force the child to conform to their wishes. An acceptance of the democratic philosophy of education will result in the practice of helping each child to develop his own unique potentialities rather than the practice of expecting each child to measure up to some arbitrary standard.

Principals and teachers can examine the practices in their school in the light of the basic personality needs of children by using the following questions as guides:

1. Does the school program take into consideration the biological, social, emotional, and intellectual needs of pupils?

2. Are teachers and principals patient and tolerant with pupils who are having difficulty in adjusting to adult standards of behavior?

3. Do school policies make it possible for all children, despite differences in abilities, to meet their needs?

4. Do teachers help each child to set goals in terms of his abilities?

5. Are parents encouraged and helped to face reality in regard to expectations they have for their children?

6. Are failures of children in school subjects studied to find out the causes and are efforts made to prevent wholesale failure by adjusting the work to developmental needs?

7. Are adequate opportunities provided for exceptional children to succeed to the extent of their abilities?

8. Are opportunities provided for children to learn to work as members of a group and to learn to become increasingly self-directing?

9. Do teachers look upon skills in communication, use of numbers, and other areas as a means of helping each child meet his developmental needs rather than as ends in themselves?

10. Does the social climate of the school encourage children to discuss freely their problems and needs with teachers?

As trustees of the cultural heritage, it is natural for teachers to attempt to make children conform, as far as possible, to the standards accepted by the culture. But often a lack of understanding of the growth patterns of

children causes our demands to bear too heavily upon the child before he is ready for it. To help the child learn gradually to conform to the world as it is and at the same time take into consideration the relentless urges of his own nature is no easy task. If we can learn to be less rigid in our demands, if we can take more of our cues from the child himself as he pursues his developmental course, if we can urge conformity upon him at times when he is ready to accept, we shall be collaborating with the demands of his growth pattern, and his adjustment will be accomplished with less friction and more satisfaction. That is why it is important for teachers and parents to know something about the facts of human growth and development.

Principles of Learning

A wide gap exists between current knowledge of the nature of the learning process and actual practice in most elementary-school classrooms. Principles of learning that have been accepted for decades are still often violated in many classrooms. The principles of learning listed below are among those commonly disregarded.

Learning is more efficient when it is related to pupil purposes

The activities in which children engage in classrooms take on unity and meaning when they are closely related to purposes that are real to children. Such activities call forth greater effort on the part of pupils and foster the development of initiative, originality, and self-direction—qualities that are recognized as essential in a democratic society.

Pupil purposes serve the functions of organizing, vitalizing, and relating the activities in which children engage. It is the responsibility of the teacher, therefore, to utilize purposes that children already have and to reveal to them purposes they can understand and accept. This does not mean that the teacher is helpless when confronted with a group of children who do not have clearly defined purposes. She can create situations that cause children to realize the need for certain abilities. Such a situation exists, for example, in a unit of work when a child wants to paint an object a certain color. Instead of beginning with a lesson on the blending of colors, the teacher helps the child experiment with the blending of various colors in response to his need for a certain color.

It is a misconception of modern education to assume that pupil purposes constitute both the means and ends of education. Many things must be

learned simply because of the demands of living in the world as it is. In addition to utilizing purposes that children already have, the teacher has the responsibility of helping pupils develop worth-while purposes. Pupil purposes must come from somewhere, and since the teacher has a broader background of experience, she has the same obligation to make suggestions for worthwhile undertakings that the master carpenter has for making suggestions to the apprentice. Pupil purposes are the means rather than the ends of education. They cannot tell us where we should go; they can only help us to get there.

Growth and learning are continuous

Children have been growing and learning for several years before they enter school. Teachers are giving more attention to what the child already knows when he enters school and are making greater efforts to relate school learning to what has already taken place. After the child enters school, he continues to learn during the hours he spends out of school. More consideration is being given to what children learn from out-of-school experiences, and school experiences are being related more closely to what is learned out of school. The problem of providing continuity in the learning experiences of children will be treated in detail in Chapter 5.

Each child is unique in his rate of learning

Individual differences among children have been recognized for several decades. In a physical contest, no one would think of pitting a child who weighs only 80 pounds against another who weighs 150 pounds. Yet, in spite of the findings of research relating to individual differences, school practices are still largely geared to the class-as-a-whole procedure.

Elementary schools that have advanced beyond the talk stage in meeting individual differences are eliminating the competitive marking system; adopting newer practices in regard to grouping, promoting, and reporting on the progress of pupils; substituting developmental tasks for minimum grade standards; providing each teacher with a supply of reading materials of varying levels of difficulty; and modifying teaching procedures to permit each child to find the group and the activity which is best suited to his interests and abilities.

In their attempts to meet individual differences, elementary schools in the past have by and large concentrated on slow and average learners to the

neglect of the gifted child. Since Sputnik, however, there has been increasing concern about children with high intellectual ability, and a number of plans have been advanced for these children. Unfortunately, misconceptions have also developed; one of these lies in the definition of "gifted." In our present craze to provide for the brightest, many children are being mistakenly labeled as gifted. In some school systems, classrooms bearing the label "gifted class" are being set up, with an intelligence quotient of 120 as the floor for entrance to the special class. Yet in the present generation of test-wise children, an intelligence quotient of 120 is hardly remarkable. Since the minimum IQ for successful completion of a good college is estimated to be about 120, some children mistakenly labeled as gifted may be terribly disillusioned later in their school careers to find themselves in the bottom half of their college graduating class. A more realistic floor for intellectual giftedness would be an intelligence quotient of 150.

It is not an impossible task for teachers to accommodate children with intelligence quotients of 120, 130, or even 140 within the self-contained classroom of the elementary school. Translated into grade scores, this means that a third-grade teacher must plan for some children who can do beginning fourth- or fifth-grade work, and, at the most, an occasional individual who can do sixth-grade work. Grouping for instruction in some subjects, which most teachers do anyway, and providing advanced learning materials for fast learners are relatively simple adjustments that can be made.

Whether special classes or schools for gifted children (IQ of 150 or above) should be set up depends upon many factors. Where these classes exist, whether a child should be placed in one depends upon the maturity of the child, distance to special class, adjustment of the child, as well as intellectual ability. However, since these children are rare (150 IQ occurs once in a thousand cases; 180 IQ once in a million), only very large communities or communities with unusual populations (e.g., a university community) have enough gifted pupils at any one grade level to make special classes feasible. Most school systems must attempt to meet the needs of these children in other ways; these will be described in later chapters of this book.

Children learn several things at once

Children do not learn only one thing in a given situation. This is the familiar principle of concomitant learnings. The learning that is supposed to be incidental to the main task is frequently as important as the material to be learned. The personality effects that flow from the learning experience are of major importance. If the process of learning to read is so unpleasant that

the child never wants to read again, there is a need to re-examine the teaching procedure.

A child learns best when the task is adjusted to his level of maturity

All children who are six years of age are not equally ready for a formal program of reading instruction. The rush to see that every child has a vocabulary of so many words by Thanksgiving and that every child has completed so many readers by the end of the first year in school results in overlooking completely the differences in maturity levels existing among children of the same chronological age. To expect more of a child than he is mature enough to accomplish is harmful; to fail to challenge a child to work up to the limit of his capacity is equally harmful. If a child in the kindergarten is ready to read, he should be taught to do so.

Experiments in the teaching of arithmetic have shown that it is a waste of time and effort to try to teach concepts and processes before the child is mature enough to profit from the experience. These experiments have resulted in the postponement of certain topics and processes to later in the school program. Why pay a high price for strawberries in February when they will be much cheaper in June? On the other hand, there is evidence that bright children become bored with too slow a pace and form habits of wasting their time. These children also need tasks that are adjusted to their maturity.

Children learn best through lifelike experiences

The best learning situation is the one in which children participate, under the guidance of the teacher, in the solution of problems. Children formerly learned most of the things they needed to know by actual participation in the work that parents were doing. As this situation changed and children had to learn in school most of the things they needed to know, it became difficult to retain this type of learning by doing. Schools came to depend more and more on learning from books and less and less on learning through participation in real-life experiences. Someone has said, "A curse came upon learning with the invention of printing."

There has been a trend in recent years to introduce more of this "home" type of learning into the school program. By the use of audio-visual resources, excursions, school gardens, care of pets in school, school clubs, and various types of problem-solving activities, modern elementary schools are bringing more real-life activities into the curriculum.

Summary

1. The teacher is a builder of human lives and a trustee of the cultural heritage which this generation holds for the enrichment of the next.

2. *Teachers need to be equipped with technical skills* comparable to those required for members of other important professions.

3. There is increasing acceptance of the view that learning involves the modification of behavior rather than merely the acquisition of knowledge and skills.

4. *The psychological foundations of traditional school practices were mechanistic; those of the modern school are organismic.*

5. *Principals, teachers, and parents in modern elementary schools are working together in child-study programs* in an effort to gain a better understanding of the characteristics and needs of children.

6. Teachers who understand children have (a) an understanding of the philosophy of growth, (b) an understanding that behavior is learned, (c) a belief in the inherent worth of very child, (d) an understanding of scientific facts and principles relating to human growth and development, (e) skill in the use of evaluation instruments and procedures, and (f) enthusiasm for teaching and working with children.

7. Teachers need an understanding of the basic personality needs of children, including (a) biological needs, (b) the need to achieve group status, (c) the need to grow gradually toward independence, (d) the need for security and satisfaction, (e) the need for getting and giving affection, (f) the need for developing the skills used in communication, and (g) the need to learn to face reality.

8. Curriculum improvement depends upon the application of modern principles of learning to classroom procedures.

SOME PROBLEMS AND PROJECTS

1. *How and to what extent a child uses his intelligence depends in large part upon his personality. The classroom teacher often discovers that a pupil does not learn as efficiently as he might because of some personality difficulty. To help the child improve the teacher must find ways of helping the child to overcome the difficulty.*

Following are typical problems:

a. *Karen is shy and woefully lacking in self-confidence. Can her third-grade teacher best help her by encouraging the class to select her as a princess for the play? Might such a role be difficult for Karen? Is there also a danger in giving Karen too much public praise and approval? What gradual ways might the teacher find to build up Karen's self-confidence?*

b. *Do some children appear to have an insatiable desire for status? Seven-year-old Bobby, for example, must be first in everything. He continually looks to the class and to the teacher for praise and approval. He is crushed by criticism and cannot take failure. Should his teacher attempt to fill all of his status needs?*

c. *Miss Townsend recognizes that helping children grow toward independence is very desirable. Her problem with Harvey, however, is that he is lacking in dependence. He does not want help or guidance from anybody, including Miss Townsend. He is not a problem in the class but he wants to make up his own mind and to make his own decisions.*

   Should teachers be concerned about the too-independent child? How might Harvey have learned this behavior? How should Miss Townsend deal with Harvey?

d. *Second-grade Alice presents a different level of problem. She is too dependent upon her teacher, continually looking to her to know what she should do, apparently helpless to make even the simplest decisions for herself. Should her teacher refuse to help her? How might Alice react if an attempt is made to have her suddenly stand on her own feet? How might the teacher gradually encourage Alice to be more independent?*

2. The classroom teacher frequently finds herself caught between two conflicting ideals. For example, the development of well-rounded personalities is frequently cited as the ideal toward which the teacher should strive, but she is also advised that learning is more efficient when it is related to pupil needs and purposes.

Miss Schwartz finds herself in a dilemma because of the conflict between these two points of view. Eleven-year-old Harry in his sixth grade is very much absorbed in science. He reads all the science books and magazines he can get his hands on, has a laboratory in his basement where he performs experiments, and is now preparing a science manual for younger children who want to experiment. Harry, however, is pathetically awkward on the baseball diamond and has only one friend in the school—a seventh-grade

student who shares his enthusiasm for science. He has little interest in social affairs and is almost a recluse.

Miss Schwartz does not know what to do about Harry. Should she try to make him a "well-rounded" individual by putting pressure on him to engage in sports, to read widely, to become more social? On the other hand, with so much to learn in the field of science, can Harry ever be a good science student if he permits his energies to be distracted into other channels? What might be a safe middle ground for Miss Schwartz and Harry?

3. In recent years it has been fashionable for teachers to collect sociometric information about their pupils. Thus, Mrs. Zembrouski asks each pupil to name his three best friends. Then she analyzes the data and locates the "stars," or those who are most popular in the class, the "fringers," or those who are on the outskirts of the group, and the "isolates," or those who are not chosen by anyone in the group. Mrs. Zembrouski is particularly interested in the isolates, for she feels that these are likely to be children with personality problems.

Recently, however, some concern has been expressed in the research literature over the too-popular child. Studies of the children seem to show that some of them become so anxious about maintaining a high status in the group that they become shallow and superficial children whose chief motivation is to be liked by others.

Should Mrs. Zembrouski assume that all isolates are personality problems? That all stars are anxious children?

What techniques other than the sociometric might Mrs. Zembrouski use in studying the children in her class and locating those who need help?

4. In Mr. Haggerty's town there is a child-guidance clinic to which children with personality problems too difficult for a teacher to handle may be referred. Which of these pupils from Mr. Haggerty's sixth grade should he refer? What kinds of additional information about his pupils will Mr. Haggerty need in making his referrals?

Sexually maturing Mary, who is dating the boys and is said to be "fast"

Dick, who has a record of stealing ever since his father deserted the home

Bob, who is a thorn in Mr. Haggerty's side because he continually disrupts the class.

Quiet Tony, who never volunteers in class and who is a poor student.

5. It is a rare teacher who never finds it necessary to punish a child. Sometimes the punishment may be a mild reproof: "That's enough of that nonsense, Bill. Sit down and get to work." Sometimes it may be isolation:

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a. Karen is shy and woefully lacking in self-confidence. Can her third-grade teacher best help her by encouraging the class to select her as a princess for the play? Might such a role be difficult for Karen? Is there also a danger in giving Karen too much public praise and approval? What gradual ways might the teacher find to build up Karen's self-confidence?

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"George, you aren't working very well where you are. Suppose you move your desk over to the side of the room, away from the group, to see if it will be easier for you to concentrate." Sometimes it may be deprivation of privileges: "Dick, you aren't going to be able to go to the special program this afternoon since your work is not finished." Sometimes, unfortunately, sarcasm and biting retorts or even physical punishment are employed.

Read R. Sears, E. Maccoby, and H. Levin, *Patterns of Child Rearing* (Row Peterson, 1957), Chapter 9, "Techniques of Training." Then evaluate each of the following in terms of its long-range effectiveness.

a. Miss Hawkins teaches in a slum area in Chicago. She dislikes physical punishment but uses it and justifies it in this way. "These children only know physical punishment," she maintains. "Their parents have always struck them to make them toe the mark. It's necessary to take a ruler to them at times because it's the only kind of punishment that they recognize. Otherwise they think I'm being soft with them."

b. Mrs. House finds that shaming pupils is an effective disciplinary technique. When a pupil does something to disrupt the class, she insists that the pupil come up before the room and repeat the act so that the other children can laugh at him.

c. In Mrs. Connell's school, teachers are not permitted to use physical punishment. She has found a workable substitute, however. When a pupil has done something that merits a whipping, she sends a note home to his parents informing them of his conduct. She urges them to punish the child as they think best, reminding them that it is not possible for her to strike the child.

SELECTED READINGS

ASSOCIATION FOR SUPERVISION AND CURRICULUM DEVELOPMENT, 1947 Yearbook, *Organizing the Elementary School for Living and Learning* (National Education Association). Chapter 2, "Focus on the Child," points out the responsibility of the school for meeting the developmental needs of children and shows how these needs may be met by giving attention to (1) the school environment, (2) school organization, (3) the curriculum, and (4) systematic programs of child study.

———— 1950 Yearbook, *Fostering Mental Health in Our Schools* (National Education Association). Deals with biological, social, and educational factors that influence mental health.

BEAUCHAMP, GEORGE A., *Planning the Elementary School Curriculum* (Allyn & Bacon, 1956). Chapter 6, "The Nature and Demands of Children," deals with physical growth, intellectual growth, social growth, and emotional growth. It also points out implications of research in the area of child

growth for the curriculum. Chapter 7, "The Nature of the Learning Process," points out the significance of an understanding of learning for curriculum workers.

Beck, R. H., Cook, W. W., and Kearney, N. C., *Curriculum in the Modern Elementary School* (Prentice-Hall, Inc., 1953). Chapters 2, 3, and 4 deal with individual differences, motivating behavior, and the psychological approach to curriculum development. Research is cited to support modern elementary-school procedures.

Cantor, Nathaniel, *The Teaching-Learning Process* (Henry Holt and Co., 1953). Chapter 12, "The Propositions of Modern Learning," presents and explains eight principles of learning.

Cronbach, Lee J., *Educational Psychology* (Harcourt, Brace & Co., 1954). Chapter 1 explains the contributions of psychology to education and evaluates the effectiveness of modern teaching methods. Chapter 3 presents an introduction to the learning process.

Garrison, Noble Lee, *The Improvement of Teaching* (Henry Holt and Co., 1955). Chapter 11, "How the Teacher Learns to Understand Pupils," explains how to diagnose pupil problems, use cumulative records, make observational records, and construct sociograms.

Jersild, Arthur T., and Tasch, Ruth J., *Children's Interests and What They Suggest for Education* (Teachers College, Columbia University, 1949). Reports a cooperative study of children's interests made by the teachers of Springfield, Mo., under the direction of the Horace Mann-Lincoln Institute for School Experimentation.

Prescott, Daniel A., *The Child in the Educative Process* (McGraw-Hill, 1957). Part Two on "Understanding Children" gives suggestions for obtaining, organizing, and using information about children. Chapter 12 explains how education is changing.

White, Verna, *Studying the Individual Pupil* (Harper & Brothers, 1958). Suggests techniques that classroom teachers can use to learn more about pupils.

SELECTED FILMS

Developing Responsibility, A one-reel sound film. How a boy carries out responsibilities at home and at school. Stresses good planning and consistent effort. Coronet Films.

Developing Self-Reliance. A one-reel sound film. A boy, accustomed to depending on others, develops self-reliance by assuming responsibility, being informed, recognizing goals, and making decisions. Stresses the difference between dependence and seeking advice and needed help. Coronet Films.

Individual Differences. A two-reel sound film. Shows how a teacher can provide for individual differences, the effects of a standardized type of teaching on a shy, slow, deliberate learner, and how understanding and individualized treatment is needed. Coronet Films.

Learning and Growth. A one-reel sound film. Arnold Gesell explains relationships between learning and growth; presents some suggestions for directing learning activities. Encyclopaedia Britannica Films.

Learning to Understand Children. A sound film in two parts, each part is two-reels in length.

Part I. *A Diagnostic Approach.* A case study of an emotionally and socially maladjusted girl of fifteen; the teacher observes her behavior, studies her previous record, visits her home, and conducts an interview in order to understand her better and be able to help her.

Part II. *A Remedial Program.* The teacher uses the girl's interest in art to help her gain self-confidence and acceptance by her classmates. McGraw-Hill Films.

Willie and the Mouse. A one-reel sound film. Shows how experiments with laboratory mice have implications for classroom practice; shows the effect of continuous failure on behavior: contrasts the traditional classroom with the modern classroom. Teaching Films Custodians.

□ THE ENVIRONMENT that man himself has made is called the *culture*. It consists of artifacts, ideas, language, attitudes, beliefs, customs, and the like, existing at a particular time and place. Children are born in the midst of a culture, but it is only through a long process of learning that they are able to avail themselves of their cultural heritage. The process of "growing into the culture" may be called acculturation, socialization, or education. The instrumentality the school uses to foster this process is called the curriculum.

The preceding chapter emphasized the importance of a systematic study of the characteristics and needs of children as a guide to curriculum-planning. But the needs of children can be fully understood only as they are studied in relation to the conditions and values of the society in which children live. Child development does not take place in a vacuum; the culture is the sustaining environment for human personality, in the same sense that soil, air, and water are necessary for plant growth. The guiding principles for curriculum-planning must therefore be derived from a study of the characteristics and needs of children who are growing up in a given culture.

This chapter is concerned with the challenge of contemporary life to the curriculum, the power of education to improve conditions of living, the relationship of the school to other

The Culture and the Curriculum

The teacher must be constantly in touch with the everchanging American life—its needs, conditions, trends, practices, knowledge, aspirations. There is no such thing as a "completed" education for the truly effective teacher in an American public school.—HARL R. DOUGLASS

educative agencies, and the democratic process as a guide to curriculum-planning.

Contemporary Life and the Curriculum

If education is to be effective in improving living, it must take into consideration time, place, and circumstances. There is little to be gained from wishing that circumstances were different or from longing for a return to the "good old days." The specifications for an elementary-school curriculum suited to the second half of the twentieth century cannot be determined entirely by examining the so-called "eternal verities," by reading the "great books," or even by examining the interests of children. They will be dictated to a large degree by the stern realities of the age in which we live. Any program for improving the elementary-school curriculum must therefore include an analysis of significant problems of living in our times.

The following list of problems at the growing edge of our culture is only illustrative. There are many others that must be taken into consideration in planning the elementary-school curriculum. Some specific changes in the culture that have occurred in recent years and others that are forecast for the next few decades are discussed in Chapters 16 and 17.

Our dynamic society

The most outstanding characteristic of the age in which we live is rapid change. More changes take place now in the span of a few years than our fathers saw in a whole lifetime. Science, translated into invention and technology, has brought about changes at a constantly accelerated rate. Technology has transformed the pattern of life for individuals, modified the functions of the family, erased old community boundaries, and changed the pattern of leisure time and recreation activities. Because we live in the midst of a vast technological revolution which renders obsolete much of the structure and operation of our existing social institutions, the need to apply trained intelligence to problems of human living is greater than ever before in our history as a nation. Modern man is indeed obsolete unless he can adapt his social, political, and educational agencies to the demands of the new age.[1]

That we have not yet learned to live with the automobile, much less the airplane and the atomic bomb, is illustrated by the congested traffic on our streets and highways and by the alarming increase in deaths caused by auto-

[1] See Norman Cousins, *Modern Man Is Obsolete* (

mobile accidents. The added responsibility placed on education by the advent of the airplane caused one educator to ask, "Are we, the last generation of the earthbound, able to teach the first generation with wings?" [2]

The atomic bomb has given a new urgency to efforts to create a cooperative world community. The schools have always had the responsibility for helping to develop intelligent citizens for our country; they must now help to develop citizens of the world. In his last address, which he prepared but did not live to deliver, Franklin D. Roosevelt wrote, "We are faced with the preeminent fact that if civilization is to survive, we must cultivate the science of human relationships—the ability of people of all kinds to live together and work together in the same world, at peace."

The dynamic nature of our society places several responsibilities on the curriculum-maker. First, pupils must be taught to think for themselves and develop solutions to problems rather than memorize answers. Second, curriculum-making must be a continuous process if it is to keep step with rapidly changing conditions and needs. Third, a more intimate relationship must exist between what is taught in school and what is going on in society.

Interdependence of individuals, communities, and nations

Science and technology have enabled modern man to become the master of distance. Improvements in transportation and communication have enabled him to get the things he needs from faraway places, to extend his personal contacts, and to share the advantages of membership in ever-enlarging groups. We have become so accustomed to the benefits that come from specialization, division of labor, and the exchange of products between far distant sections of the country that we are inclined to overlook the fact that such interdependence requires more understanding and skill in human relationships than was necessary under the old system.

At the time that the public-school system was developed in this country, most people lived on small farms or in villages where every family kept its own cows, provided its own fuel, raised its own food, had its own water supply, and put out its own fires. Under these conditions, life was an individualistic, every-fellow-for-himself game and there was very little need for cooperation or skill in human relationships beyond the range of the family. School practices were, naturally, designed to develop the type of individual who could survive under those conditions.

The life of today is much more complex. Most people live in cities, and the water supply, fuel, fire protection, sanitation, police protection, and recre-

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[2] Alexander J. Stoddard, *The Role of the School in the Present Emergency* (Official Report, American Association of School Administrators, National Education Association, 1942), pp. 38–45.

ational facilities are necessarily cooperative enterprises. Communities depend upon other communities, states upon other states, and nations upon other nations for goods and services. A man in Texas may sit at the breakfast table and drink coffee that came from Brazil, sweeten it with sugar that came from Cuba, stir it with a spoon from the silver mines of Peru, and listen to news from around the world as it comes over the radio. Not only must the average citizen cooperate with others in the local community in order to supply his needs, but his welfare is determined to a greater extent than ever before by what is taking place in Washington, in Paris, in Moscow, and in other places throughout the world. Isolationism is as outmoded for the individual as it is for the nation.

In the better elementary schools, curriculum-planning takes full account of the interdependence of contemporary life. Children learn to participate as members of a group in planning and carrying out projects and units of work. They perceive how people in the community cooperate to meet common needs, such as education, fire protection, health, and recreation; they learn through the social studies program how people living in various parts of the world depend upon other people for the goods and services they need. How the faculty of an elementary school can plan to meet the needs of children growing up in an interdependent society is illustrated in Chapter 6, which presents suggestions for improving group living in the classroom, and in Chapter 9, which shows how the social-studies program contributes to inter-cultural understanding, a better understanding of the local community, and more effective participation in group enterprises.

Lack of educational opportunities in the home

In order to understand why it has been necessary for the school to assume an increasing amount of responsibility for the education of the child, we need to consider the altered role of the home as an educational agency. The traditional functions of the home, through which children once received a major part of their education, have been transferred. The food that was formerly produced and prepared at home is now produced elsewhere and prepared in factories, bakeries, and restaurants. The manufacture and laundering of clothing have been industrialized, and the care of the sick has been institutionalized in hospitals, clinics, and visiting nurse services. The home as a recreational center has been replaced by movies, sports, and other forms of commercialized recreation.

Among other factors that have contributed to the decline of the home as an educational agency have been the increase in the number of families living in apartments and the consequent decrease in the number of home chores,

such as providing fuel, mowing the lawn, and repairing equipment; the multiplication of broken homes; the decrease in the size of families; and the increase in the number of mothers who work outside the home.

The changed status of the home has been responsible to a large extent for the expanded program of the elementary school. Efforts to teach the child good habits of work, including home-making skills in the curriculum, increased emphasis on the development of health habits, guidance programs for the purpose of helping children to become better adjusted socially and emotionally, and many other phases of the modern elementary-school program illustrate the fact that the school is trying to adjust its program to meet educational needs arising from the displacement of the home as prime producer and educator.

The increase in crime and delinquency

It is estimated that the total financial costs of crime in this country amounts to more than ten billion dollars annually, a sum more than three times as great as the cost of maintaining the public schools. The rapid increase in juvenile delinquency constitutes one of our most serious social problems.

There are many causes of crime and delinquency, but most authorities agree that one leading cause is inadequate educational opportunities. The evidence indicates that crime decreases with the amount of formal education; about three times as many illiterate persons are committed to prisons as those who have attended college. The factors that contribute to crime and delinquency are too complex to be traced to any single source, but the school, as well as all other educative agencies, is concerned with eliminating the known causes as much as possible.

Penologists have found a close relationship between school failure and delinquency. Children become dissatisfied with a school curriculum that is unsuited to their needs, too difficult for them, or unrelated to their everyday experiences. Some begin to lag behind other children in the class, become discouraged, drop out of school, and are eventually committed to a reformatory or penitentiary.

These conditions pose a problem for those who are concerned with planning the curriculum. The school has always been looked upon as the chief formal agency for developing good citizens; it can continue to perform this service only through a curriculum which is adjusted to the abilities and needs of the rapidly increasing number of children who attend it.

Elementary schools have been handicapped in developing effective programs of citizenship education by overcrowded classrooms, inadequate in-

Daring to Be Different or Delighting in Being Different

Although the emphasis in the text is on encouraging individualism, a distinction must be made between expressing one's individuality constructively and being a professional nonconformist. As classroom teachers know, there are some children who at a very early age delight in being different— not because the "different" behavior is necessarily more creative or more constructive, but simply because it sets them apart from the rest of the group. Instead of learning to value the good opinion of others, they learn to enjoy a perverse satisfaction in unconventional behavior that is shocking to others.

Nonconformity for its own sake is as much to be deplored as undue conformity. Either extreme when found in children is often an indication of a poor psychological adjustment. The child who never wants to go along with the group and who flaunts his individuality is often the child who is at loggerheads with one of his parents and who has trouble adjusting to authority. The child who is unduly concerned about the opinion of others may be one who has learned his overconcern from a too-demanding, perfectionist parent.

When such extremes are found, the teacher must take care that the classroom environment does not strengthen the existing behaviors. In addition, the teacher or school counselor may help the child in a series of individual conferences to acquire insight into his problem. Patient understanding on the teacher's part and favorable comments on any behaviors in the desired direction are also important in effecting change in pupil personality.

"Why do you have to be a nonconformist like everybody else?"

How Are Learning Experiences Initiated?

Educational journals frequently carry accounts of fascinating experiences that elementary-school children have had as a result of an almost accidental happening or of something a pupil brought into class. A third-grade class embarks on a study of Hawaii, for example, when news stories of its statehood are reported by pupils. A fifth grade plunges into a unit on astronomy after a pupil visited and reported on his trip to an observatory. Unfortunately, these accounts sometimes lead teachers to the generalization that every unit of study must begin with the children. Actually, curriculum practices today recognize the place of both the "emerging" type of study described above and the more formally planned experiences, which take account of sequence from grade to grade.

The educational experience pictured here might have started with the children. It is not hard in this day and age to conceive of elementary pupils asking the kinds of questions that might lead to study of some phase of electricity. "How does a telegraph set work?" or "I got these dry cells for my birthday. Can we use them to wire a doorbell for our room?" might initiate a discussion that would lead the teacher to believe that science time during the next few weeks might profitably be devoted to pursuing the children's interests in the field.

The curriculum, however, does not and should not consist exclusively of experiences that arise in accidental fashion. Many school systems have developed curriculum guides that help the teacher in deciding what her pupils should study in such areas as health, science, and social studies. Units of study selected from these guides are introduced by the teacher. The teacher will attempt to relate the material to areas of knowledge they already have, but she need make no effort to pretend that "it all started with the children."

© (Photo: Henry G. Bookstaber, Art Supervisor; courtesy Ridgewood Public Schools)

structional supplies, and poorly prepared teachers, but there has been a concerted effort on the part of enlightened citizens and professional educators to remedy these conditions. Curriculum improvement programs in the better elementary schools are taking into account the need for preventing crime and delinquency by (1) providing school experiences in harmony with the abilities and needs of all children; (2) cooperating with educational agencies in the community in providing the best possible environment for children; (3) providing for the continuous evaluation of the social adjustment of children; (4) providing opportunities for children to learn citizenship by participation in cooperative group enterprises; and (5) working with community agencies in providing wholesome recreational activities during vacation periods as well as during school sessions. Suggestions for developing an elementary-school curriculum designed to meet the social needs of children will be discussed in later chapters.

The rapid depletion of natural resources

The need for conservation or resource-use education is becoming more obvious each year. Our forefathers inherited a continent rich in natural resources, but our history has been one of waste and depletion. Many of our natural resources are becoming dangerously scarce, and a decent concern for future generations demands that education, industry, and government cooperate to correct the errors of the past.

How well people live is closely related to the number of acres of productive land available per person. The conservation of the soil is therefore not altogether a matter of individual discretion; society has an obligation to see that soil is not misused so that the welfare of the community is threatened.

Agricultural experts say that fifty million acres of once productive soil have been destroyed by wind and water erosion, and that an equal number of acres have been badly damaged by other factors. Seventy-five per cent of our productive land is now subject to soil erosion and therefore threatened with destruction unless something is done to prevent this. Much the same situation exists in respect to forests, minerals, and wildlife.

Those who have given the most study to these problems agree on two remedies—education and legislation—and it is generally agreed that more good can be accomplished through education than through legislation. Conservation must exist in the mind before it can be applied to the soil. The causes of destruction of our natural resources are deeply rooted in the habits, attitudes, and institutions that comprise our culture. They cannot be legislated out of existence until conservation is widely understood and supported

by the people. The schools have a responsibility for making citizens aware of the resources upon which they depend for survival, and every teacher has a share in this responsibility.

The program in conservation education in elementary schools

Many elementary-school programs reflect the growing concern for wise use of natural resources. Teachers and principals have been giving increasing attention to teaching children about the local environment and to the problem of improving living in the community, the state, and the nation. The elementary school that functions as an integral part of community life helps children and adults identify the conservation problems of major concern to the community, develops ways and means of incorporating conservation education into various parts of the school curriculum, and makes full use of community agencies in carrying the program forward.

The program in conservation education will necessarily vary from one elementary school to another. The following suggestions, however, should be generally useful in planning the program:

1. The success of the program depends largely upon the initiative of the elementary-school principal in arousing the interest of parents, pupils, and teachers, in securing the cooperation of outside agencies, and in providing the organization for cooperative planning and evaluation of the program.

2. Conservation education cannot be appropriately confined to any one subject or field. The social studies, science, health, and the practical arts all provide opportunities for developing understanding and appreciation of the conservation problem.

3. The elementary concepts of conservation can be understood and appreciated by very young children.

4. Basic materials that can be organized for instructional purposes are available from both private and governmental sources. The U.S. Soil Conservation Service, the agricultural extension service of the land grant colleges, the U.S. Office of Education, and the county agent are sources from which material on various aspects of conservation may be obtained.

5. Field trips, experiments, and the use of audio-visual resources are excellent devices for making concepts more meaningful and for relating conservation education to daily living in the community.

6. Conservation education should have an important place in programs of in-service education of teachers, since a large number of teachers now in service have little if any formal preparation for teaching conservation.

The nation's health

Although official records indicate that the nation's health has been constantly improving for several decades, they also indicate that it has not yet reached a satisfactory level. Continued improvement in the health of our people constitutes a challenge to physicians, educators, and health agencies of the state and nation.

The development of new drugs, better qualified physicians, and more effective programs of health education have reduced the number of deaths from many communicable diseases and have increased the average life span. Industrial accidents have also declined sharply and the infant mortality rates have dropped to about one third of what they were in 1915. On the other hand, automobile accidents and accidents in the home have increased; heart disease, cancer, and diabetes are among the leading causes of death; a large number of individuals at all age levels are inadequately nourished; and mental illness is widespread. During World War II, the armed services rejected for physical, mental, and educational deficiencies one out of every three of the young men examined. Ignorance, superstition, and misinformation about health problems remain widespread even among otherwise well-educated persons.

The conditions demand an intensification of educational efforts to improve the health of our people. The programs developed by elementary schools to meet this demand are discussed in detail in Chapter 12.

The school in an anti-intellectual society

There is an increasing amount of concern about the way anti-intellectual forces are operating in American life. Sociologists point out that the American child is continually bombarded with stimuli that demand little of him in the way of intellectual activity, build up in him a desire for material things, and implant in him a scorn for intellectual achievement. For example, it is fashionable to call an educated person an egghead and to define a scientist as someone who has never met a pay roll.

The schools are expected to foster respect for intellectual achievements although children and youth are surrounded for most of their waking hours by socializing forces outside the school that teach them that interests other than intellectual ones are the most important ones in American life. For example, a leading picture weekly complains bitterly that high school students cannot name two living scientists while informing its readers about the details of a popular rock-and-roll singer's haircut, the comeback of a prize fighter, and the love life of a movie actress. Four issues of the magazine contain a scant two pages about a leading scientist. Children in the elementary

school learn a great deal more about the exploits of outstanding athletes than they do about valedictorians, mathematical geniuses, or outstanding students in science.

The impact of the elementary-school curriculum on the influence of anti-intellectual forces from the society as a whole can perhaps be slight. Nevertheless, everything possible should be done to encourage intellectual interests on the part of pupils. The schools can provide models to imitate other than those provided by picture magazines and television, stimulate interest in intellectual pursuits, and use methods that make learning exciting and satisfying to children.

**Other aspects of our culture that have
implications for curriculum planning**

Our list of social problems confronted in contemporary living is by no means inclusive. The threat of war, with new and more destructive weapons; the mobility of the population; the increase in the amount of leisure time; inadequate housing and crowded schools; value conflicts; and intergroup tensions are additional problems the public school in a free society must face realistically and help to solve.

The Power of Education

The analysis in the preceding section of conditions and problems existing in our culture assumes that the kind of curriculum needed must be decided in the light of the kind of nation we want to help build. It assumes that the fitness of our nation to survive in the years ahead depends to a large degree upon the success or failure of our system of public education. In this section we shall see the relationship between the kind of education provided and the strength of communities, the strength of our nation, and international stability.

Science and technology have made it possible for us to have a higher standard of living than most people in the world today. While two thirds to three fourths of the people in some countries go to bed hungry every night, we have better homes, better food, better clothing, and more luxuries than ever before. Visitors from other countries are amazed to see hundreds of automobiles parked near our factories. In this country even the workers drive automobiles! During World War II we became the arsenal of democracy, producing bombers and other materials of war not only for our own armed forces but for our allies as well, without any substantial reduction in the standard of living for civilians.

Education and the strength of the nation

What are the sources of America's strength? A continent rich in natural resources and blessed with favorable climate, an economic system which sets free the creative and productive powers of capable individuals, an abundant supply of labor made more efficient by a system of universal education and technical training—all of these and many other factors have helped to make us a strong nation. But the most important source of America's strength lies in the quality of her citizens.

David E. Lilienthal, who, as former head of the Tennessee Valley Authority and Chairman of the Atomic Energy Commission, should know something about the sources of power, told a graduating class at Michigan State College that nothing could be more dangerous to the future security of our nation or the peace of the world than the belief that the strength of America is to be found in the possession of the atomic bomb. Instead, he said:

> Neither the atomic weapon nor any other form of force constitutes the true source of American strength. . . . our strength is in the faiths we cherish. We are a people with faith in each other . . . and when we lose that faith we are weak, however heavily armed. We are a people with faith in reason and the unending pursuit of new knowledge; and when we lose that faith we are insecure. We are a people with a faith in the free inquiring mind. We are a people with a faith in God, with a deep sense of stewardship to our Creator. And when these faiths are no longer strong within us, we are weak and we are lost, however heavily armed with weapons we may be. To us the individual human spirit comes first . . . and this it is that is the well-spring of our strength, this it is that is the spirit of democracy.[3]

A study published by the United States Chamber of Commerce illustrates clearly the power of education to influence the economic welfare of people. Colombia, in South America, has an abundance of natural resources, a good climate, a low level of education and technical training, and a low national income. Denmark, on the other hand, has sandy land, few minerals, a short growing season, a high level of education and technical training, and a high national income. Similar comparisons are made between Mexico and New Zealand, Brazil and the United States, Rumania and Switzerland, and Yugoslavia and Norway.[4] The evidence in each of these comparisons indicates that every country that has a high income also has a high level of education and technical training. Some, but not all, of the countries with high income have good natural resources and favorable climate. The influence of education on national income is shown even more clearly in a country such as

[3] David E. Lilienthal, "The Wellspring of America's Strength," *The Reader's Digest*, October 1949, pp. 129–131.

[4] Harold F. Clark, *Education Steps Up Living Standards* (Chamber of Commerce of the United States, 1945).

Denmark, which a hundred years ago had a low national income. It developed a high level of education and technical training and today has a relatively high income.

Education and economic welfare in the several states

Another study compares the educational level of the people of the various states with several indexes of economic well-being, such as per-capita retail sales, magazine circulation, telephone service, rent paid, and salary earned. This study shows clearly that money spent on schools is an investment that businessmen and other citizens can well afford in terms of improvement in economic conditions. Thirty-one states held the same group position in both level of education and per-capital retail sales.[5]

A fact that must not be overlooked is that educational opportunities are not uniformly distributed among the people in various sections of the country. Communities in the State of New York spend as much as $6,000 a year per classroom unit, whereas some southern communities spend as little as $100 a year per classroom. An unbalance of 60 to 1 in educational opportunities represents a failure to live up to our democratic aspirations in respect to equality of educational opportunities.

Education and the level of living in communities

Experiments in low-income communities show clearly that education can be used to help people obtain a higher standard of living through their own efforts. Since we are committed in this country to the effort to provide for every citizen the greatest degree possible of economic security, we can either help them through some kind of government dole or help them through education to help themselves. Education is not only the cheaper way but the one that corresponds more closely with American traditions. Studies such as those published by the Chamber of Commerce of the United States show that education and technical information help people to (1) improve their diet, (2) improve housing conditions, and (3) gain more income through agriculture. The current Point Four Program in relation to the undeveloped areas of the world is an extension of this idea on a world-wide scale.

One of the most promising trends in public education in recent years has been the increasing number of school systems that have set out deliber-

[5] Harold F. Clark, *Education: An Investment in People* (Chamber of Commerce of the United States, 1944).

ately to improve the quality of living in the communities they serve. Bixby, Okla., Norris, Tenn., Holtville, Ala., Greenville, S. C., and Kent's Store, Va., are a few of the places where the problems of living in the community have become the concern of the school and the school has become the center of community improvement efforts. The community improvement idea not only gives the school a significant social function to perform; it gives children a feeling of being engaged in an enterprise that matters. This is a type of education well suited to a democracy.

Education and international stability

Today the people of the world are in a life-and-death struggle between two competing ideologies, and it may be that all that stands between us and catastrophe is a realistic program of education in human relationships. Our own international position, at least depends upon our strength, both moral and physical, and public education seems to be our greatest single resource for maintaining that strength. Our public-school system is the most effective instrument we have for strengthening family and community life and for decreasing the fears that breed hatred, crime, and fanaticism. It is the only nationwide instrument for giving individuals a sense of security and for building in the social order the strength and unity that are moral imperatives of the day.

If our schools are to meet these obligations, their services must be expanded to serve more people and serve them better than ever before. Any idea that the present staff and physical facilities of the schools can meet these obligations is wishful thinking. Education for improving community living, for giving strength and unity to our nation in a time of grave peril, and for making sure the foundations of international peace will be costly. But the cost will be justified even if it is double the present amount.

The School and Other Educative Agencies

Education, when broadly interpreted, is a function of the total culture. The culture not only sets the tasks to be accomplished through education but also serves as a means of education. Too much of the work of the school has been done without taking into account the work of other educative agencies.

The school was originally designed, in this country, not to provide an education in the sense that we now use the term but to add a little book learning to the education the child was already getting in the home. The

industrial revolution and the consequent urbanization of life caused many of the responsibilities of the home to be transferred to the school. The modern elementary school is expected not only to teach the conventional school subjects but to develop stable personalities, foster physical and mental health, prepare for home and family living, develop good citizens, and contribute to international understanding.

An objective look at the situation *as it exists today* leads to the conviction that elementary schools cannot alone accomplish all of these worth-while objectives. They cannot even make a major contribution to such an inclusive program *unless they are provided* with smaller classes, better buildings and grounds, improved instructional materials, better qualified teachers, more specialized personnel, such as physicians and psychologists, and *more adequately trained leadership.*

There are those, of course, who propose a very simple solution to the problem of an overloaded school program. *They would allocate certain functions, others to the home, and still others to various community agencies.* Aside from the very practical problem of finding an individual or a group *with the authority to make such an allocation of functions,* such a proposal overlooks the nature of the learning process and the facts of child growth and development. Suppose, for example, that *all* of the responsibility for the health of the child *could be allocated to the home and the family physician.* It is easy to see that living conditions in the school and community would continue to influence the health of the child. It is true that the home may be primarily responsible for *certain phases of the child's health,* such as proper diet and the securing of medical services when they are needed; that the community may be primarily responsible for maintaining a safe water supply, reducing traffic hazards, and *providing facilities for wholesome recreation;* and that the school may be primarily responsible for health instruction. This does not mean, however, that the home, the school, and the community can eách work effectively *in promoting the health of the child without any cooperation.* The home, the school, and the community must work in close harmony if the needs of the child are to be supplied in the area of health as well as *in other important areas.*

Curriculum planning that takes into account *the fact that education is a function of the total environment* involves a study of the influence of various educational agencies and an effort to find what the implications are for the work of the school.

The home

In spite of the changes that have taken place *in family life, the home* remains one of the most effective educative agencies in our society. *It is in*

the home that the child first learns to use language, develops attitudes, and forms his ideas of right and wrong. The early years at home are the most formative ones of his life, and their influence remains with him after he starts school; his education is thus a continuous process. To the modern cliché that "the whole child goes to school" we need to add that he takes his home background with him.

Good elementary schools obtain information about the home background of each child, visit the homes of children, and seek the ideas of parents about needed changes in the school program. Elementary schools cannot continue to improve without interested, cooperative parents who take part in study groups, share information with teachers about characteristics and needs of children, make teachers feel at home in the community, and try to provide better living conditions in the community for all children. Through the establishment of nursery schools and kindergartens, through Parent-Teacher Associations, and through the work of visiting teachers, the elementary school supplements and complements the work of parents in providing the best opportunities possible for children to learn and grow.

The community

One of the outstanding achievements of the last few decades has been the increasing recognition of the part the community plays in the education of the child. A study of fifty leading educational journals showed that the number of articles concerned with community study and participation increased 986 percent between 1930 and 1941.[*]

There are many aspects of the problem of school and community relationships. To some it means the public-relations program of the school; to some it means that teachers should become active members of the community; others are interested in using community resources in the instructional program; and still others think primarily in terms of finding useful community improvement projects in which children can participate. Good elementary schools must be interested in all of these phases of the problem. Our purpose at this point is to call attention to the fact that one of the most effective nonschool educative agencies is the life of the community.

It is in the everyday activities of community life that children see at first hand the structure and processes of human society. Language is being used, mathematics and science are at work, music and art are being enjoyed, and history and literature are being lived in the community. It is to a large extent through participation in the work of Boy Scouts, Girl Scouts, and other community groups that children learn cooperation, leadership, and social re-

[*] Edward G. Olsen, *School and Community* (Prentice-Hall, Inc., 1945), pp. 14–15.

sponsibility. A single family, even with the help of an excellent school program, cannot control all of the factors that influence the growth and development of children. A part of the responsibility of parents is to work cooperatively with others to develop a wholesome community for children; for children learn from the life of the community as well as from the home and the school.

The over-all job of education can be carried out only if the resources of the community in the areas of health, welfare, and recreation are coordinated and put to work. The school can provide the leadership for community action, but it cannot accomplish the whole task alone. The school cannot control all the educational influences to which the child is exposed, such as the movies, comics, radio, and television. Communities, working together under intelligent leadership, have done a great deal to eliminate harmful influences and to provide wholesome ones. Unless teachers, parents, and community leaders have a broad concept of the organic wholeness of the educational problem, children will continue to be confused by contradictions in what is expected of them.

The press

The newspaper has been called democracy's textbook. Most adults read the newspaper every day, and many read magazines regularly. If it is the function of the school to help people do better the worth-while things in life that they will do anyway, teachers certainly should be concerned with helping pupils learn how to read the newspaper intelligently. Children in the elementary school, especially in the upper grades, obtain information and form attitudes from reading newspapers and magazines. Dale has written a very useful book for high-school students on how to read a newspaper.[†] Teachers and parents of elementary-school children should be aware of the influence of newspapers and magazines, especially of the comics, on the attitudes of children and should know how to help children select reading material intelligently.

The motion picture, radio, and television

Every teacher knows that the motion picture, the radio, and television are powerful educative agencies. The fact cannot be ignored that virtually every home has a radio, many have television sets, and many elementary-school children attend at least one movie a week. Children get so much in-

[†] Edgar Dale, *How to Read a Newspaper* (Scott, Foresman & Co.), 1941.

formation and entertainment from these sources that it is difficult to get them to spend time on the more demanding process of reading.

Great progress has been made in using these agencies for educational purposes. The Cleveland Public Schools have pioneered in the use of radio as a regular part of the instructional program. They have had a school-owned station since 1938. Many state universities, including Oklahoma, Ohio State, Illinois, Iowa, Wisconsin, and Texas, have school-of-the-air programs for elementary-school children. The program at the University of Oklahoma centers around health, music, art, literature, and the social studies. Study guides and unit outlines are distributed to teachers in advance to enable them to make the best educational use of the programs.

The home, the school, and the community need to cooperate in teaching children to evaluate motion picture, radio, and television programs, in trying to obtain better programs, and in providing some means of compensating for the crime, sex, adventure, and false values so frequently emphasized in these mass media.

The church

The importance of moral and spiritual values has always been recognized by our state and national leaders. An outstanding example of this recognition is the Northwest Ordinance of 1787, which stated, "Religion, morality, and knowledge being necessary to good government and the happiness of mankind, schools and the means of education shall be forever encouraged." The fact that property used exclusively for religious and educational purposes is exempt from taxation is further evidence of the concern for such values. In today's society, where materialistic influences are strong, some means must be found to continue emphasizing spiritual ideals and ethical standards.

Most teachers recognize the importance of spiritual values both as a phase of child development and as a social necessity. The coordination of the work of the church, the home, and the school in this phase of the child's education, however, without violating our tradition of the separation of church and state, constitutes a real problem. In order to maintain religious freedom, the state must safeguard the interests of people of all religious faiths rather than those of one denomination or creed. But, although the public school, as an agency of the state, must avoid sectarian or denominational religious teaching, it can nevertheless emphasize spiritual values that are nonsectarian. There is work enough for the school and the church to do if both of them accept the principle that the welfare of the child should be the deciding factor in the approach to moral education.

The church is one of the most effective educational agencies in our cul-

ture. Church membership in the United States increased from fifty-five million in 1936 to eighty-one million in 1941. The worship service, the church school, daily vacation Bible schools, and youth choirs provide valuable educational experiences for children. Many of the larger churches employ a director of education who understands modern methods of teaching and helps volunteer workers plan lessons in the light of specific objectives. The use of audio-visual resources for learning is increasing rapidly in the educational departments of churches.

Modern elementary schools are making efforts to supplement the work of the church by emphasizing spiritual values in the curriculum. A recent yearbook of the National Elementary School Principal's Association is devoted to *Spiritual Values in the Elementary School.* Curriculum guides published by city and state school systems frequently include a section on developing spiritual values; the Los Angeles school system has prepared a bulletin devoted entirely to spiritual values in the elementary school.

Democracy and the Curriculum

That democracy is the highest social ideal of the American people has been amply demonstrated. Throughout its history this nation has stood before the world as a champion of human freedom; it has drawn people from many lands who wished to escape from class rule and despotism. Although it is obvious that in practice democracy is frequently repudiated in government as well as in education and that the average citizen has a very limited concept of its meaning, it is still a vital force in education and in American life. An understanding of the implications of democracy is therefore one of the major factors to be reckoned with in curriculum planning.

The idea that the school is society's chief formal agency for preserving and improving the democratic way of life is not new. It was more than one hundred and fifty years ago that Webster wrote, "If, then, the youth were to grow into citizens capable of furthering democracy, it must be by means of an education suited to a democracy." In spite of the long-established faith in education as the foundation of democracy, however, only a small beginning has been made in learning the methods appropriate to that way of teaching and learning. A popular magazine made the statement a few years ago, "No United States citizens are fonder of praising democracy than the heads of that most authoritarian institution—the United States school." Until very recently, at least, democracy in education has been preached but not practiced.

Democracy has been repudiated in practice by teachers and school administrators because they have not fully understood its meaning. It has been

variously defined as a form of government, as a spirit, and as the right of everyone to do as he pleases. It is not surprising that those who hold such limited views of democracy find it difficult to make it work in schools. *Democracy is a process—a quality of human relationships which has the welfare of the individual as its paramount objective.* In this sense democracy can operate in any group of individuals, whether it be a nation, a family, a classroom, a factory, or a ladies' aid society. Furthermore, it can be seen in operation, provided one knows what to look for. Some of the essential characteristics of the democratic process are listed in the following sections as yardsticks for school practices. It is the conviction of the author that the success or failure of curriculum-improvement programs will be determined by the extent to which these principles are understood and practiced.

Democracy employs the method of experimentation

In a democracy, individuals and groups are free to experiment, to work out unique solutions to their problems. This is one of the innate strengths of democracy: things are true only if they work out in practice and not merely because someone in authority said they were true. Democratic educational practices give each teacher and each child a chance to experiment, to express himself, to work out, under wise guidance, the solution to his problems. Authoritarian systems, whether in nations or in schools, dig their own graves by suppressing all ideas except those of individuals who are in positions of authority. How much authoritarian teaching can be found in our classrooms? How free are pupils to experiment? How much authoritarian administration can be found in our schools? How free are teachers to experiment with new methods, new materials, and new ideas? Classrooms and school systems need to be evaluated in terms of these questions if we are interested in promoting democracy in education.

Democracy promotes equality of opportunity

Equality of opportunity does not mean equality of possessions or equality of achievement. It simply means that every individual will have an opportunity to achieve as much as his ability and effort permit; that the school will provide opportunities for all children rather than for a selected few. It means that grade standards, promotion policies, or a narrow, book-centered curriculum will not stand in the way of helping a child develop to the full extent whatever talents he has. The school curriculum that provides opportunities for only the intellectual elite is out of harmony with democratic

principles. The curriculum that does not offer any challenge to the more capable pupils is likewise undemocratic.

Democracy provides for participation by all persons involved in a given action

The democratic process broadens the base of judgments on which policies rest. School policies resting on the combined judgments of all persons involved are more stable than those resulting from the decision of one person. Furthermore, it is only by sharing in the choice of activities to be undertaken and by accepting responsibility for results that teachers and children grow in those qualities which make for the success of a democracy. The teacher who recognizes his responsibility for developing responsible, self-directing citizens will deliberately organize his teaching so that every pupil takes a responsible part in the work of the class. The principal who understands and appreciates democratic values organizes his work so that every teacher shares in the responsibility of making decisions and accepts responsibility for helping to carry out group decisions. It is only through meaningful participation that pupils and teachers grow in the ability to function effectively in democratic group processes.

Democracy requires faith in people

The great leaders of the past have had faith in the ability of the people to make the right decisions when given adequate information. Democracy in education requires faith in the ability of children to become increasingly self-directing if given enough encouragement and guidance; it means faith in the ability of teachers to make intelligent plans for the school program when they are given sound leadership and sufficient time to do the job.

Democracy means respect for personality and human worth

In a democracy, human beings are ends rather than means. School practices must be judged in terms of their effect on the children involved. A school may be very efficient and still be bad when evaluated in terms of democratic values; the schools of Nazi Germany were very efficient, but from the standpoint of democratic values they were very bad schools. Schools are evaluated in terms of the quality of living which they foster.

.....The teacher, who wishes to evaluate her teaching in the light of the democratic principle of respect for personality should ask herself the following questions:

1. Do I expect all pupils to measure up to the same standard of conduct and achievement?

2. Am I tolerant of a pupil with an undesirable personality if he is making an effort to improve?

3. Is it ever possible for the slower pupils to experience success?...

4. Are bright pupils challenged to achieve as much as their abilities permit rather than merely reaching grade standards?

5. Can a pupil admit lack of information without fear of criticism?

The principal who wishes to evaluate his leadership in the light of the democratic principle of respect for personality should ask himself the following questions:

1. Do I expect all teachers to use the same methods in teaching arithmetic, spelling, and other subjects?

2. Am I patient with a teacher who has difficulty in adjusting to newer procedures but is trying to improve?

3. Do I take time to try to discover the special talents of teachers and compliment them for outstanding achievements?

4. Are important responsibilities distributed among the teachers or do the most capable ones get all of the interesting and challenging assignments?

5. Do teachers feel free to admit mistakes without fear of criticism?

6. Do I make deliberate efforts to build teacher morale?

Democracy provides opportunities for the individual to learn to be free

Discovering and using the methods of democracy involves clear understanding of the nature of freedom and how individuals obtain it. Teachers in the public schools have a particular responsibility for understanding this problem for they must not only teach the tricks of numbers and the shapes of letters, but they must help our future citizens learn the ways of democracy.

Freedom is not a gift; it is an achievement. The problem of the teacher is not to give children freedom but to help them learn to be free. Children do not learn freedom simply by being released from adult control; neither do they learn it by being held under the complete domination of the teacher from year to year. Freedom is achieved as the individual learns self-control which raises him above the necessity of social control. In the democratic school there is a decreasing amount of teacher control as children grow older and are able to take more responsibility for their own behavior.

... Freedom involves the mastery of skills and techniques. An individual who cannot spell has little freedom of self-expression in writing; if he has not mastered certain techniques relating to form and color, he has little freedom of self-expression in art. Even if we regarded freedom as the right of the child to do as he pleases, he would still have to learn how to do as he pleases. A school curriculum is democratic to the extent that it helps children learn the skills, attitudes, and information necessary for free men.

Democracy involves cooperation for the common good

Democracy cannot survive in a group composed of selfish individuals. A school curriculum that stresses competition alone cannot develop citizens capable of furthering democratic values. The teacher who cannot work effectively as a member of a team, who has not developed the skills of democratic cooperation, has no place in an elementary school. The principal who is interested only in promoting himself, who has not developed the techniques of democratic leadership, is also unfit for his position.[8]

This does not mean, of course, that all competition must be eliminated from the life of the elementary school; some competition is inevitable in school as well as in life outside the school. It simply means that children must learn the skills involved in cooperation as well as those involved in competition if they are to be prepared for effective living in a society that involves both.

The argument is frequently heard that we must train pupils for competition because we are living in a competitive society. The answer is that we are also living in a society in which it is necessary for the individual to cooperate with others if he is to accomplish anything worth-while. Furthermore, the school should help to develop those traits and abilities needed for building a better society rather than merely perpetuating the undesirable features of the society we now have.

The application of democratic principles to specific phases of the elementary-school program is stressed throughout this book, particularly in Chapters 6 and 7.

Summary

1. Any program for improving the elementary-school curriculum must include an analysis of the problems of living in our culture.

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[8] See Kenneth D. Benne and Bozidar Muntyan, *Human Relations in Curriculum Change* (Henry Holt and Co., 1951), pp. 296–316.

2. Some social realities that have implications for curriculum-planning are: (a) the dynamic nature of our society, (b) the interdependence of our society, (c) the changing status of the home, (d) problems confronting the consumer, (e) crime and delinquency, (f) the conservation of natural resources, and (g) the nation's health.

3. The kind of education provided has an important influence on such problems as (a) the strength of the nation, (b) the economic welfare of people in the several states, (c) the standard of living in communities, and (d) international stability.

4. It is necessary to understand the influence of nonschool educative agencies so that curriculum-planning can reinforce the desirable influences and counteract the unwholesome ones.

5. The guiding principles for improving the elementary-school curriculum are to be found in the ethical ideals of the American people which have come to be known as democracy.

6. Democracy is frequently repudiated in elementary schools both by teachers and by principals because they do not have a clear understanding of its meaning.

7. Democracy is a process—a quality of human relationships which has the welfare of the individual as its paramount objective.

8. Some of the essential elements in the democratic process are (a) using the method of experimentation, (b) promoting equality of opportunity, (c) providing for participation by all members of a group in determining purposes and plans, (d) having faith in people, (e) respecting the worth of human beings, (f) providing opportunities for individuals to learn the skills and techniques of freedom, and (g) providing opportunities for learning the skills of democratic cooperation.

SOME PROBLEMS AND PROJECTS

1. That education should be related to community living has long been a principle accepted by educators, but there has been wide diversity of practice in carrying out this principle. Here are some examples:

The sixth grade in Marshall School decided to improve the community by cleaning out a corner lot near the school that had long been an eyesore.

The fifth grade in Titusville stationed teams of pupils at each inter-

section where school children had to cross a busy street going to and from school. With counters borrowed from the police department, these teams counted the number of cars traveling during the thirty-minute periods before and after school. They submitted their facts on traffic to the police and succeeded in getting the department to protect those street crossings where heaviest traffic occurred.

A seventh-grade class in Bennington made a study of the incidence of tooth decay in their school population as revealed by the school dentist's examination, compared their data with those of communities in which the drinking water had been fluorinated, and distributed copies of their report to the P.T.A.

A sixth grade studied the work of the Urban League in Westchester County to find out about employment opportunities for Negroes.

A third-grade class collected pictures of good and poor housing in the community.

The eighth grade in Woodstock School "ran" the community for one day. One of the boys acted as mayor, another as chief of police, others were aldermen, etc.

Analyze each one of these practices in terms of its good and bad features. Are there some problems that might better be left to adults? Which ones represent "busy work" only and do little to deepen children's understanding of community problems? Which may tread on the toes of some pupils? Which take into account what we know about social change? As you analyze each, see whether you can arrive at some generalizations that will help you in relating education to community problems.

2. Miss Bothwell is a firm believer in working with parents, but her problem is that she never sees some of the parents she would most like to reach. There are the Davises, for example, with six children, who live in a shack in that part of town known as The Flats. Mrs. Davis never comes to P.T.A. or to any of the school programs, partly because, like many lower-class parents, she has never been convinced of the benefits of education and regards the school as her enemy. This attitude of the lower class toward the school has been clearly substantiated by research. Most lower-class parents have not gone beyond the eighth grade themselves and do not see education as a way of getting ahead. When asked how far they expect their children to go in school, lower-class parents are likely to say, "Till the law says he kin leave," or "Well, I hope maybe he'll make it to high school." These parents look upon many of the things the school asks of them as unreasonable, ridiculous, and "them old maids' peculiar notions."

How is Miss Bothwell to establish contact with Mrs. Davis? Should she have a Visiting Day, when all parents will be invited to visit? Should she put

pressure on her pupils, urging them to get their parents out for P.T.A. so that the class will receive the banner and the $2 award at the meeting? Should she write to Mrs. Davis to invite her to come to school for a conference? Should she plan an informal visit to the home? Evaluate each of these alternatives in the light of their possible effects upon Mrs. Davis.

3. This chapter has pointed out that teachers must of necessity be concerned with more than the intellectual development of their pupils.

Should there be a limit to the roles the teacher assumes or must she attempt to deal with all of the problems children bring with them to school? Should she attempt to act as psychologist? parent counselor? doctor? ophthalmologist? psychiatrist? social worker? How should she deal with problems in each of these areas?

4. Current research reveals that lower-class children do not join the Boy Scouts, Girl Scouts, and other community groups. If possible, sample a school in your community attended by children of high socioeconomic status and one attended by children of low socioeconomic status. Find out how many children in each school belong to community groups. If you find a difference on the basis of social-class membership, can you suggest a reason for it?

Before you attempt field work of this kind, it might be helpful for your class to discuss ways of obtaining such data without antagonizing any of the people involved.

5. Recently readers of a midwestern newspaper followed with great interest the "Letters to the Editor" column appearing after a television play. The play was televised on the only channel available locally at a time regularly scheduled for Westerns. Included in it were short excerpts from actual movies of a Nazi concentration camp. The ovens, the gas chambers, the mass graves, the wasted bodies of victims awaiting burial as well as the living skeletons—all were included in the film. The play touched off a heated controversy. There were those who protested against such atrocities being shown to children and who at the same time pleaded that the children not be deprived of their "beloved cowboys." Others defended the play on the grounds that it helped the viewer to understand a major social problem. Which side do you favor, and why?

6. This community controversy has its educational counterpart, as Chapter 3 has pointed out. The child does not grow up in a vacuum; he cannot be shielded from the social realities of our time. Indeed, if education is to improve conditions of living, he must know not only what is right with

society. but also what is wrong, although, of course, the learning experiences must be appropriate to his developmental level.

Here are some social problems that frequently come up in classrooms, or that could be made part of present studies of the community:

> race prejudice
> social-class prejudice
> poor housing
> prejudice against foreigners

Should the school deal with problems of this kind? If so, list the concepts that the primary teacher might include and also those to be taught in the intermediate-upper grades. Defend your answer. Or, if you think that no attention should be paid to these problems, give your reasons.

SELECTED READINGS

AMERICAN ASSOCIATION OF SCHOOL ADMINISTRATORS, *Educating for American Citizenship* (National Education Association, 1954). Chapter 2 discusses the impact of the technological revolution on social institutions, population changes, and world-wide movements. Chapter 3 discusses ideals and values that are basic to American society.

ASSOCIATION FOR SUPERVISION AND CURRICULUM DEVELOPMENT, *Forces Affecting American Education* (National Education Association, 1953). Chapter 2, "The Culture Affecting Education," makes a plea for dynamic education in a dynamic culture.

BEAUCHAMP, GEORGE A., *Planning the Elementary School Curriculum* (Allyn & Bacon, 1956). Chapter 5, "The School in Society," describes the nature of culture, social change, and implications for schools.

BROOKOVER, WILBUR B., *A Sociology of Education* (American Book Co., 1955). Part 1 deals with education in the social order; Part 5, with the school in the community.

LANE, HOWARD, and BEAUCHAMP, MARY, *Human Relations in Teaching* (Prentice-Hall, Inc., 1955). Chapter 7, on "Teaching the New Fundamentals," and Chapter 8, "Some Urgent Needs of Society," provide many interesting insights into what it means to live in mid-century America.

LINDBERG, LUCILE, *The Democratic Classroom* (Teachers College, Columbia University, 1954). Identifies the elements of the democratic process and shows how it is being taught in schools.

MELBY, ERNEST O., *Administering Community Education* (Prentice-Hall, Inc., 1955). Shows how changes in American life and changes in world affairs have created a crisis in education that can be met only by a greater expenditure of creative effort by professional educators and by the public.

MYERS, ALONZO F., and WILLIAMS, CLARENCE O., *Education in a Democracy* (4th ed., Prentice-Hall, Inc., 1954). Unit 4 presents "Contemporary Problems Challenging Education."

STANLEY, WILLIAM O., SMITH, B. OTHANEL, BENNE, KENNETH D., and ANDERSON, ARCHIBALD W., *Social Foundations of Education* (Henry Holt and Co.,

1956). Chapter 2 treats such problems as "Social Change and the School," "The Relation of School and Culture," and "Cultural Change and the Curriculum."

SELECTED FILMS

Assignment: Tomorrow. A three-reel sound film indicating the importance of the teacher in preserving our American way of life. Shows the activities in a modern schoolroom which help pupils to develop the ability to think for themselves, to be conscious of the needs of the community, and to cooperate with others in meeting these needs. National Education Association.

Democracy. A one-reel sound film that explains the meaning of democracy and the conditions that foster it. Encyclopaedia Britannica Films.

Education Is Good Business. A one-reel sound film that shows the difference good schools make in business conditions. General Pictures Productions, Des Moines, Iowa.

Practicing Democracy in the Classroom. A two-reel sound film that shows how future citizens of America can develop attitudes and habits of behavior which will determine the way they will discharge responsibilities as adult citizens of a democratic society. Encyclopaedia Britannica Films.

☐ INTEREST in the role that education should play in our society has been increasing in recent decades. This intensified interest is not confined to members of the teaching profession; it is shared by parents; agencies of government; press, radio and television; and citizens in many walks of life. This is true in part because in this country educational policies are formulated by the people themselves rather than by the central government; in part because the schools reach more children than ever before; and in part because there is a growing conviction that good schools contribute to our economic welfare and to the survival of our democratic way of life.

Members of the school staff, because of their special preparation, are expected to be more keenly aware, than others of the social significance of education and to be able to help other citizens understand and appreciate the contributions the school can make to the solution of problems of living. Curriculum improvement programs, therefore, have been placing a great deal of emphasis on developing increasing competence on the part of all staff members in formulating, stating, and interpreting to the public the objectives of the school program.

The Nature and Functions of Educational Objectives

An important factor in the success of any individual or group enter-

Elementary-School Objectives

The general end of education in America at the present time is the fullest possible development of the individual within the framework of our present industrialized democratic society. The attainment of this end is to be observed in individual behavior or conduct.— WILLIAM G. CARR

prise is a clear recognition of the end, or condition, the individual or the group is striving to achieve. This is no simple task in an enterprise that involves the cooperation of as many people as does public education. Efforts to give a separate and distinct meaning to such terms as outcomes, goals, purposes, aims, and objectives of education usually prove to be more confusing than useful. Definitions found in a standard dictionary and in the *Dictionary of Education* fail to support any such distinction. In this chapter, the terms are used interchangeably to mean the values sought through public education. This concept is broad enough to include the values sought by children and youth, by teachers and school administrators, by parents, and by the society the schools serve. Furthermore, no distinction need be made between the objectives of the elementary school and those of the secondary school. Certain objectives may be given more emphasis at one level than the other but the objectives themselves are the same.

Elementary-school programs can continue to improve only as teachers, pupils, parents, and administrators participate in defining the kind of school program they would like to have, in evaluating the present program in the light of commonly accepted criteria, and in making specific plans for improving the program. Clearly understood objectives serve several useful purposes in this process:

1. *Objectives define the directions in which it is desirable for growth to take place.* The teacher, as an agent of society, cannot avoid the responsibility for making decisions concerning what types of experiences are educative and what types are miseducative. Children will learn even when they do not attend school at all. They will learn from experiences at home, from the neighborhood gang, and from radio, motion pictures, and television. However, much of this learning may be miseducative because the experiences are not planned or directed toward the achievement of specific values. Education, or at least that phase of it for which the elementary school is responsible, is not synonymous with learning; rather, it is learning directed toward the achievement of values that are prized in the society in which the school exists.

2. *Objectives provide a basis for the selection of learning experiences.* Because there are so many interesting things that can be learned in school, teachers need some basis for selecting those that are most crucial in the life outside the school and those that children in the elementary school can be expected to learn. Unless learning experiences are selected in terms of a comprehensive list of objectives, the elementary-school curriculum can easily become static, guided by tradition, and insensitive to the dynamic forces that affect the lives of children. Arithmetic, for example, can consist primarily of abstract drill in computation, neglecting the development of understanding, problem-solving, and practical applications of arithmetic to problems of every-

day living. Other areas of the curriculum may consist primarily of memorizing the content of textbooks, neglecting the development of skills, methods of work, interests, and appreciations.

3. *Objectives provide a basis for evaluation.* Objectives indicate the information, skills, attitudes, and behavior patterns the school regards as important for children. Evaluation of pupil progress consists of determining the progress each child is making toward the achievement of these objectives. There can be no comprehensive program for evaluating pupil progress without clearly recognized objectives. Materials of instruction, methods of teaching, and pupil-teacher relations can be evaluated only in terms of their contribution to the achievement of the objectives of the school. Evaluation of the effectiveness of the school program also requires an understanding of objectives. The objectives of the school represent what the staff of the school is trying to accomplish with and for children. Evaluation of the school program consists of determining how well they are succeeding in what they set out to do. Objectives also help in interpreting the school program to the community. Research indicates that parents who are fully informed about the purposes and procedures of the school are usually well satisfied with what the schools are doing.[1]

Some Sources of Educational Objectives

Educational objectives in this country grow out of the needs of individuals living in an industrialized democratic society. They represent the best thinking of teachers, administrators, and parents at a given time; as conditions change and as research brings new information to bear on the problems of education, objectives must change to fit these new conditions. The objectives of the elementary school, therefore, give expression to a philosophy of education based on the realities of living in contemporary society, the values inherent in the democratic way of life, and the characteristics and needs of children.

1. *Objectives grow out of a philosophy of education.* Many teachers regard philosophy as a highly abstract, theoretical, and impractical study. It is true that a course in philosophy can be a form of busywork or a kind of mumbling in the dark that does not shed much light upon the path ahead. However, the teacher must have a working philosophy of education to keep her work from becoming monotonous round of details. Plato says in the Third Book of the *Republic* that it is necessary to formulate the ideal so that the practical can know in which direction to move. The teacher's

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[1] Kenneth B. Henderson and Harold C. Hand, "To What Extent Is the General Public in Sympathy with the Current Attacks on the Schools?" *Progressive Education*, January 1952, pp. 110–115.

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philosophy of education cannot be completed at any given time; it is a living, growing, one that represents her vision of the results of her work in terms of richer lives for individuals and a better social order. Whether she is aware of it or not, every decision that the teacher makes in the classroom is related to her convictions about the worth of the individual, about the nature of the good life, and about the role of the school in society; and these convictions constitute her philosophy of education.

2. *Objectives emerge from studies of contemporary society.* What children in the elementary school should learn depends to a considerable degree upon conditions existing in the society. The society that supports the school expects that it will develop in children and youth those insights, skills, and attitudes that will contribute to the health and vigor of society in the future. One source of educational objectives, therefore, exists in the vast array of information found in studies of contemporary society. Studies of population trends, of changes in family living, of technological developments that are changing many aspects of American life, of national income and per capita income, of changes in the number of hours in the work week, of the use of leisure time, of the effects of mass media of communication, of the impact of automation, and of new developments in international affairs, to mention only a few examples, suggest sources of educational objectives.

In addition to studies of conditions and trends in the general culture, the conditions that exist in the local community need to be examined to understand their implications for the school program. Some conditions may exist in one community which require special emphasis in the school program of that community but not in that of another. Community surveys and other methods of getting information about conditions, problems, and resources of the community constitute an important source of materials to be used in the formulation of educational objectives.

American life is changing so rapidly that continuous study of conditions and trends is necessary if what is taught in schools is to help meet the demands of living. One writer suggests that the scarce commodity in the future may not be raw materials or wealth or energy, but the capacity to consume. He suggests that men and women may begin to flee the abundance they have let loose and that the privileged classes of the future may be those who are permitted to have only one car instead of being compelled to have four.[2] Although this picture may be slightly overdrawn, the problem in many communities is no longer one of securing a minimum standard of living, but one of making wise choices as consumers.

3. *Studies of children and of the learning process provide sources of educational objectives.* Curriculum workers need to know not only what children

[2] August Heckscher, "The Next Two Decades: Coming Changes in American Life," *Current Issues in Higher Education*, National Education Association, 1957, pp. 7–8.

should learn in order to live successfully in our rapidly changing society, but what factors motivate and encourage learning. If objectives are derived entirely from studies of the culture, learning experiences are not likely to be adapted to the capacities, interests, and motivations of children. It makes little difference how important certain content may be from the standpoint of the culture if it is not appropriate for children at a certain stage in maturation. The wise selection of learning experience depends to a large extent upon the teacher's understanding of how learning takes place and what learning experiences are appropriate for the children with whom she works. It is therefore desirable for teachers and other curriculum workers to collect many types of information about the children in their schools and to use this information when formulating objectives.

4. *Subject-matter specialists can suggest appropriate objectives.* An increasing number of subject-matter specialists are giving attention to the problem of suggesting ways that their fields can make a contribution to the general education of a wide variety of children instead of merely to a limited number who will specialize in a particular field. Curriculum bulletins developed by the National Council for the Social Studies contain suggestions from specialists representing several subject fields.[3]

Some Statements of Objectives

Statements of educational objectives have reflected rather consistently the social and psychological concepts dominant at the time they were written. Plato reasoned that the society of his time needed philosophers to rule, soldiers to defend, and artisans to produce. His proposals for education, outlined in the *Republic*, were frankly designed to promote a caste system of society. Martin Luther's plea for education as a responsibility of the towns and cities of Germany reflected the concern for the welfare and freedom of the individual which was the motivating factor in the Protestant Reformation. Wherever, throughout the world, schools have been established, they have been designed to support the dominant social ideals prevailing at the time.

Herbert Spencer is given credit for first popularizing the classification of human activities as a basis for educational objectives. He identified, in 1860, five major classes of human conduct as follows: self-preservation, the securing of the necessities of life, rearing and disciplining of offspring, the maintenance of proper social and political relations, and activities which make up the leisure part of life. Statements of educational objectives prepared by

[3] Loretta E. Klee, *Social Studies for Older Children* (National Council for the Social Studies, 1953), p. 139.

individuals and professional groups in this country since the beginning of the present century have followed this general pattern, differing only in form, in arrangement, and in degree of detailed analysis.

Several significant trends in educational theory are revealed by an examination of the following statements of objectives: (1) the trend toward more specific objectives rather than vague, general statements, (2) the trend toward stating objectives in terms of changes in behavior, (3) the trend toward increasing the scope of the school program, and (4) the trend toward increasing emphasis on physical and mental health, consumer education, economic efficiency, work experience, and skill in human relationships.

The cardinal principles of secondary education

In 1918, the Commission on Reorganization of Secondary Education of the National Education Association issued a report containing the seven cardinal principles of education. This was perhaps the most influential educational document issued in this country up to that time; crucial excerpts from it were reprinted and circulated by the millions. The seven cardinal principles are: health, command of the fundamental processes, worthy home membership, vocation, citizenship, worthy use of leisure, and ethical character.

The trend toward broadening the scope of education to include more than the fundamental processes is evident in this statement. Health was given a prominent place in the list of objectives as a result of the startling discoveries by the armed services regarding the physical condition of the young men called to service for World War I. The other objectives listed were closely related to problems of living, which were becoming the concern of the American people at that time. The limitation of this statement and of the three statements that follow consists in the fact that objectives are stated in general terms which could mean many different things to different individuals and that the general objectives are not analyzed in detail to show how the behavior of an educated person would reflect the achievement of the objectives.

The Counts and Chapman Classification

In 1924, George S. Counts and James C. Chapman identified six great interests about which human life revolves. Men must always care for their bodies, rear their children, secure economic necessities, organize for civic action, engage in recreation, and satisfy their religious needs.

The Bobbitt Classification

Also in 1924, *John Franklin Bobbitt* developed a detailed analysis of human activities for curriculum-building purposes, including language, health, citizenship, general social activities, spare-time activities, mental fitness, religion, parental activities, nonvocational practical activities, and vocational activities.

The Department of Superintendence Classification

In 1928, the *Department of Superintendence* of the National Education Association identified four general areas of education by listing the relation of the individual, first, to his own growth and development; second, to the world of nature; third, to the systems of organized society; and fourth, to the Power which in some way orders the development of man and his universe. "The individual self, nature, society, and God"—these four, and in particular the adjustments the individual self must make—constitute the objectives of education.

The Educational Policies Commission Classification

The classification of educational objectives proposed by the *Educational Policies Commission* of the N.E.A., in 1938, has been widely distributed and will, no doubt, rank high among the influential documents published in America during the past century. The report states:

> The general end of education in America at the present time is the fullest possible development of the individual within the framework of our present industrialized democratic society. The attainment of this end is to be observed in individual behavior or conduct.[4]

The report of the Commission identifies four aspects of educational objectives. The first area calls for a description of the *educated person;* the second, for a description of the *educated member of the family and community group;* the third, of the *educated producer or consumer;* and the fourth, of the *educated citizen.* Following is a complete list of the objectives.

The Objectives of Self-Realization

The Inquiring Mind. The educated person has an appetite for learning.
Speech. The educated person can speak the mother tongue clearly.
Reading. The educated person reads the mother tongue efficiently.

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[4] Educational Policies Commission, *The Purposes of Education in American Democracy,* National Education Association, 1938, p. 41.

Encouraging Intellectual Interests

Although Figby College is fortunately a figment of the imagination and the concerns of its president not typical of college presidents, nevertheless the cartoon helps to bring home the fact that some of the values in our society must be changed if we want to improve the schools. When football players are subsidized, or when a community builds an elementary school with a gymnasium for basketball games that dwarfs the rest of the school and costs more than the library, pupils learn what the community values, and may eventually come to accept these values.

Schools must learn to resist some of the anti-intellectual pressures placed upon them, as well as pressures to make the nonacademic more important than the academic. Schools also must actively encourage the building of intellectual interests. This cannot be done by merely giving lip-service to intellectual values or by working them in "between halves." Intellectual interests are built by (1) helping children appreciate the contributions of scientists, musicians, artists, scholars, and writers to society; (2) rewarding children when they give evidence of intellectual interests; (3) helping children to analyze some of the anti-intellectual pressures that exist in society; and (4) giving pupils a chance to learn through experience how exciting the discovery of knowledge is, rather than giving them ready-made answers to master. © (Cartoon: courtesy George Lichty—Chicago Sun-Times Syndicate)

"A program of subsidized science might work well with our program of subsidized football, gentlemen! . . . We could stage rocket firing exhibitions between halves! . . ."
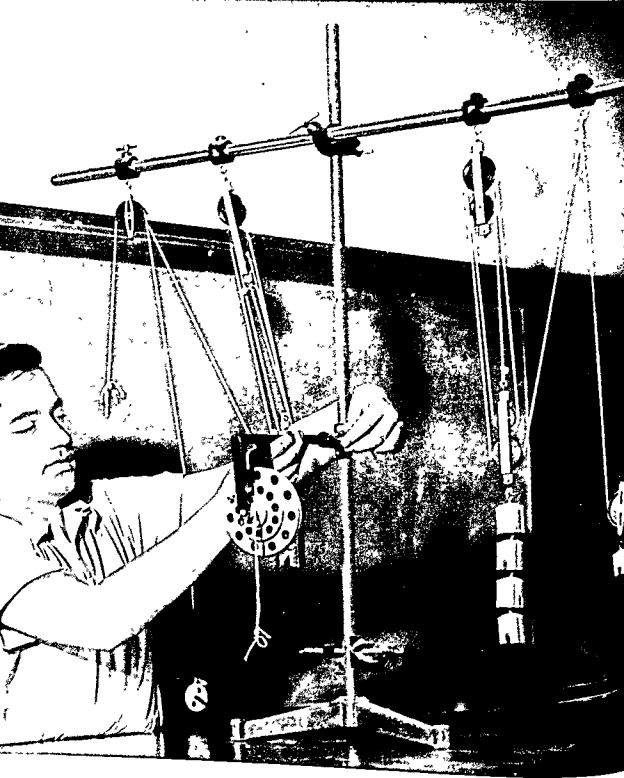
Training in Critical Thinking

Today, as never before, the American public schools are being challenged to produce citizens who are informed, creative, and intelligently critical in their thinking. Many educators believe that the way in which children learn has some bearing on the achievement of this goal. *There is some feeling that, when pupils continually learn by accepting information from teacher or textbook without questioning, undue conformity rather than creativity may result.*

Both science and social studies present excellent opportunities for training in critical thinking. In the solution of problems in these areas, *pupils can be encouraged to formulate hypotheses, to collect pertinent data, and to evaluate their hypotheses in the light of the data.*

The pupil pictured in this classroom has been studying some elementary physics and is experimenting to note the weight-lifting ability of two pulleys as compared with one. He is testing the hypothesis that an increase in the number of pulleys will result in an increase in the amount of weight that can be lifted. *However, sometimes experiments do not come off according to the book. He may find that because of an error in measurement, there is no difference between the efficiency of the two different set-ups.*

Experiments that do not "turn out right" can contribute a great deal to children's understanding of the basic principle the experiment is supposed to illustrate. *Such experiments point up variables in the experimental situation which the pupils might never have realized were there. They can be used effectively to develop habits of critical thinking. Such "mistakes" can also help pupils to appreciate the care and precision with which experiments must be planned and carried out.*

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of knowledge and understanding; skills and competencies; attitudes and interests; and action patterns. This report assumes that education is for the purpose of bringing about desirable changes in behavior, that growth and learning are continuous, and that outcomes are to be considered in terms of the range of abilities found within a group of children at any of the three levels.

Formulation of Objectives by the School Staff

Cooperative action by the entire school staff in developing a guiding philosophy for dealing with the concrete problems of school operation is an integral part of curriculum improvement. Formulating a written statement of the philosophy of the school after a period of study and exploration serves a useful purpose in giving the members of the staff a feeling of accomplishment and a sense of direction. But it should be remembered that the paper statement is not an end in itself. Its purpose is to bring about better teaching and better learning. Whether or not the study and formulation of objectives contributes to these results depends more upon the process than on the final product.

Initiating the Study of Objectives

The extent to which teacher growth is achieved through a study and formulation of educational objectives is determined to no small degree by the way the process is initiated. The program may be initiated (1) through a study of the basic sociological and psychological foundations of the curriculum, (2) by having each member of the staff prepare a statement of objectives for the school program and then having these statements organized and summarized by a committee of the faculty, (3) by accepting some well-known list of objectives such as the Educational Policies Commission list and analyzing the items in terms of the problems of the local school, or (4) by having the teachers list problems that come up naturally in the course of a few weeks or months of the school term. This last approach is probably the soundest of all.

Such a list will probably contain such problems as the following:

1. What shall our policy be in regard to first-year pupils who are not mature enough to complete in one year the work of the first grade?

2. Shall we attempt to group according to ability levels? If so, what abilities shall we consider?

3. Shall we teach history, geography, and civics as separate subjects or shall we develop a unified social-studies program?

4. What use shall we make of workbooks? How can we avoid making the mistake of substituting workbooks for teaching?

5. How much, if any, homework shall we require of pupils?

6. How can we find out how well satisfied parents are with our work and what phases they think need changing?

7. How much departmentalized teaching should we do in our school?

8. Should we work out a plan following the recommendation of the Educational Policies Commission to have the same teacher stay with a group of children for at least three years?

9. What shall we do about children of migrant parents who attend our school for only a few months each year?

A serious discussion of problems such as these will inevitably lead to a realization that their solution depends upon the philosophy of the school. Since the philosophy of the school, like that of the individual teacher, emerges from an understanding of the social and psychological foundations of education, a study of these basic factors must come into the picture at some time during the formulation of educational objectives. The leader of the faculty group will simply be applying the principles of good teaching to his work with the staff if he introduces the study of these factors after the participants see the need for it.

Preparing Written Statements of Objectives

Statements of educational objectives are prepared in a wide variety of practical situations. They may be formulated by the teacher and a group of pupils working on a unit; by teachers working at a certain level of the school program, such as the kindergarten or the middle grades; or by the entire school staff in connection with system-wide curriculum-improvement programs. There are certain guiding principles that apply to most of these situations.

Objectives should be clearly stated

Most teachers know enough about pupil and community needs to have a rather clear idea of what they are trying to accomplish in the schools. Choosing the most effective language to use in a written statement of educational objectives, however, is not an easy task. Unless the educational leadership in the school is skilled in group processes, unless the machinery is set up for thorough discussion and clarification of objectives before any attempt is made to put them down in writing, unless the best talent available on the

staff is used in the process of editing and final wording, the written objectives may be too nebulous and obscure to be very useful in guiding practice.

A committee composed of excellent kindergarten teachers in a large city school system was asked to prepare a list of objectives for the kindergarten program. Although they had for many years been working successfully in kindergarten rooms, they found it difficult to put down in writing the values they had been seeking with and for children. After considerable discussion, they were able to see that a list of objectives was nothing more than the abilities they had been trying to develop in the children, such as (1) learning to follow directions, (2) learning to distinguish between likenesses and differences, (3) learning to take turns, and (4) learning to work and play with other children.

Objectives should be limited to those that the school has a reasonable chance to achieve

Curriculum-improvement programs at one time consisted primarily of making long lists of objectives relating to every phase of the work of the school. More recently there has been a tendency to list only those objectives for which suitable activities could be planned and to which the school could make a substantial contribution. The school faculty that lists anything and everything that seems desirable as an objective runs the risk of losing public respect and confidence. It is better to have a modest list of objectives on which the school is actually working than to have an inflated list, half of which is neglected in everyday practice.

Objectives should be understood and accepted by those whose work they are supposed to influence

Time spent in the preparation of a list of objectives is largely wasted unless there has been considerable discussion, by teachers, pupils, and parents, of the values involved. Objectives accepted from a list prepared by outsiders are likely to have little influence unless they are analyzed by the local staff and accepted as pertinent to the local situation. Lists of objectives prepared by the principal and handed out to teachers are also likely to have very little meaning to those whose work they are supposed to influence.

Objectives should reflect both individual and group needs

This suggestion implies that teachers have to know a great deal about community conditions and needs if they are to be intelligent about the objec-

tives of education. It implies also that they must understand the interests, needs, and abilities of the children with whom they work. Objectives grow out of the needs of individuals living in a given environment. An objective may be a good one from the standpoint of social significance, but unless the children in a specific school are mature enough to understand it and do something about it there is very little to be gained from listing it as an objective. Curriculum-making has in the past been too much concerned with the importance of certain bodies of subject matter without taking into account the ability of children to master it or the use they can make of it.

Objectives should be reasonably comprehensive

The objectives of the traditional elementary school were concerned primarily with mental growth. That was excellent as far as it went, but the modern school must be concerned with physical, mental, social, and emotional growth. The objectives of the various school subjects were formerly stated in terms of knowledge and skills; the more recent trend is to state objectives in terms of behavior, attitudes, and appreciations as well as of knowledge and skills.

Objectives should have unity and consistency

The objectives listed should not lead in opposite directions; they should reflect a common philosophy arrived at through cooperative study and discussion by the entire school staff, pupils, and parents.

Objectives should be susceptible of evaluation

Objectives, activities, and procedures for evaluating progress should be considered together. It does very little good to list an objective unless activities for achieving it and procedures for evaluating progress are also considered.

Changing Objectives of Education

As with statements of the objectives of elementary education, there is nothing permanent about even the most recent statement, that issued by the Mid-Century Committee on Outcomes in Elemetnary Education to which reference has already been made. The areas of concern for the elementary

school will probably remain stable for some time: physical development; social and emotional development; ethical behavior; social relations; the social world; the physical world; esthetic development; communication; quantitative relationships. These may be stated in different terms; the reader may see social relations, for example, as belonging logically with social development. Indeed, social, emotional, and moral development might well be considered together since the interrelationships among these three areas are so extensive. But basically the areas of concern will probably be those stated by the Committee until radical changes occur in our society.

In fact, if the reader will look back at the earlier statements of objectives (pp. 90–93), he will see that the basic areas of concern have not changed greatly since the seven cardinal principles of education were outlined in 1918. What has changed, however, is the emphasis upon certain problems under each area, rather than upon others. In the matter of health, for example, the needs of the American people have changed greatly in the past forty years. Overweight—even among children—is more of a problem than it was earlier. Americans eat more sweets than they used to, with consequent effects upon teeth. We get less exercise. The incidence of mental illness has increased alarmingly. These changes have brought about appropriate changes in the content of the health curriculum.

The teaching of science in the elementary school is not new, but some of the present emphases in science curriculums are of recent origin. Formerly science was nature study; children learned to identify common birds, flowers, trees, and insects and learned something about their life history. The child of the Space Age needs physics and chemistry as well as botany and entomology. He studies about simple machines and why airplanes fly and how a jet plane differs from a conventional one.

In the area of the social world, too, we can find societal changes that are reflected or should be reflected in statements of objectives. The Eskimo is no longer the primitive tribe once described in textbooks; as Alaska, our fortyninth state, has become increasingly important to our national defense, its population has expanded, schools have increased, and the life of the modern Eskimo who works for one of our government agencies is not too different from that of other Americans. An objective that states that the child studies the Eskimo "to appreciate how he adjusts to living in the cold Northland" is out of date. So is a statement of objectives for the social studies in the elementary school that fails to include objectives for grades 5 to 8 with respect to the peoples of Africa, the Arab world, the Communist world, and India. Statements of objectives must continually be reappraised in the light of changing conditions in the modern world.

Additions to content or changes in emphasis are not difficult to spot in statements of objectives. There are some changes, however, that are more subtle. These concern what the child is to learn as he studies planets, air

pressure, fractions, colonial life, the Indians, or the Union of South Africa. Knowledge of specific facts was the outcome in traditional schools, but today more is required of the learner. He must still know many facts, but *not as isolated bits of information in the manner of a quiz-show contestant.* He is expected to use these facts to build principles and generalizations. It is not enough to know that Mars is the planet most like the earth; he must also know that because Mars is most like us there is more likelihood of life being present on that planet than on others. It is not enough *to know that in the fraction, three-fourths, "three" is called the numerator and "fourths" the* denominator. The child must understand the relationship between the two. In phrasing educational objectives, teacher groups should be sure that the statement of desired outcomes goes beyond the learning of specific facts.

Modern statements of objectives should also emphasize that intellectual skills are as important to content as the acquisition of knowledge. Development of these skills depends to a considerable extent upon the process by which the child learns. Does he memorize the addition facts and rules for reducing fractions to lowest terms, or does he discover these for himself? Is he learning to recognize words and to read with speed and comprehension, or is he also learning to be a critical reader? Does he learn science principles by reading a text or does he discover these through a problem-solving process? The development of a healthy curiosity, the habit of hypothesizing and then seeking evidence to test hypotheses, of weighing evidence, of reserving judgment until the evidence is in, of giving up one's cherished notions when confronted with sufficient evidence that they are false—these and other intellectual skills must receive recognition in modern statements of objectives for these are important skills in the world in which we live.

Teacher groups, then, in drawing up a statement of objectives must be sure that the objectives meet the demands of today's world. But teacher groups must also be prepared periodically to examine and revise such statements as fresh insights reveal the inadequacy of certain objectives. In the area of social development, for example, some statements of objectives have so emphasized the importance of adjusting to the peer group that development of individuality was slighted. Now the pendulum is swinging the other way as observers of the American scene point out that overemphasis upon adjustment to the group may have adverse effects upon creativity. This reassessment should be reflected in statements of objectives. Critical and continuous reappraisal of statements of objectives is vital to a good school program.

An Illustrative Statement of Guiding Principles

Whether the written statement that results from the cooperative study of educational values is called objectives, point of view, philosophy, or guid-

ing principles for the school program is not important. The important thing is that the school program has been examined in the light of certain facts and values, and that the staff, through group discussion, group planning, and group action, has arrived at a set of guiding principles which will give direction to the school program at all levels and in all areas. The following list of guiding principles illustrates the type of statement that might grow out of such a process. A similar statement might be developed by the staff of any school system and used as a basis for making more specific and detailed statements in terms of desirable behavior traits of pupils and the types of experiences needed to develop such traits.

The curriculum is regarded as all the experiences of the child for which the school assumes responsibility

The content to be taught is important, but the curriculum includes more than this. It includes a teacher-pupil relationship, the provision of opportunities for pupil participation in group activities, the school assemblies, the use of the local environment in learning—in short, it includes the whole life and program of the school.

What is happening to the child represents the final criterion for all school practices

This principle implies that every aspect of the elementary-school program will be developed with due consideration for the lessons learned from studies of child development. It implies that an effort will be made to adjust school work to the abilities, interests, and needs of children at all levels. What arithmetic does to Johnny is more important than what Johnny does in arithmetic.

The school program should orient the child in the life about him

The program of the school should be closely related to the problems of living in the local community, and local resources should be utilized as learning experiences. This procedure results in a community-centered school program. It involves an analysis of the local community as a basis for curriculum-planning.

**The school program should provide
experiences in cooperative group living**

A democratic society demands that people work together on projects for
the common welfare. The school, therefore, must provide opportunities for
children to work together, to plan together, to execute, and to evaluate. If
the school is to develop cooperative individuals, it must provide opportunities
for cooperative group living.

**The school program should provide a
balanced day of living for children**

The daily class schedule should make provisions for direct teaching of
subjects and for experience units based on important aspects of living. The
daily class schedule must provide for both group experiences and individual
experiences.

**The school program should provide opportunities for the
development of the creative abilities of children**

School life, as well as life outside of school, must of necessity involve a
certain amount of conformity. However, modern society is in great need of
creative individuals. Society's progress depends upon individuals with imagi-
nation, originality, and initiative. The school program must help the child to
discover and develop his creative abilities.

**The school program must provide for the
development of the fundamental skills**

Effective learning in present-day society requires the ability to read effec-
tively, to use correct language in written and oral expression, and to perform
mathematical operations accurately. These and many other skills are not ade-
quately dealt with in a program consisting exclusively of experience units. It
is necessary, therefore, to have a program of direct teaching of subjects to
provide for continuous growth in these areas.

Curriculum improvement begins in the thinking of teachers

In county systems as well as in town and city systems, workshops, study
groups, and professional-growth agencies must be used continually

**The school program should be based
on continuous planning**

Continuous planning by administrators, teachers, and parents is essential if the elementary-school program is to keep in step with the needs of children in a rapidly changing world.

**The evaluation program should be
comprehensive, continuous, and cooperative**

Comprehensive evaluation means that physical, social, and emotional growth as well as mental growth should be evaluated. Continuous evaluation implies that evaluation is an integral part of the teaching-learning situation—it goes on all the time instead of merely at stated intervals. Cooperative evaluation means that pupils gain experience in evaluating their own efforts instead of leaving all the evaluating to be done by the teacher. Methods of evaluation should be used which furnish opportunity for a maximum of self-direction, self-appraisal, and self-control. They should develop respect for work well done.

Summary

1. Members of the teaching profession have a special obligation for helping laymen understand and appreciate the true purposes of elementary education in American democracy.

2. The objectives of education at any level are identical with the general objectives of education in American democracy.

3. Educational objectives state the directions in which it is desirable for growth to take place.

4. Each teacher builds his own philosophy from his knowledge of the characteristics and needs of children and the realities and ideals of the society in which the school exists.

5. The teacher who has no vision of the results of his work in terms of richer lives for individuals and a better America of tomorrow will merely be engaged in a monotonous round of details.

6. The objectives of the modern elementary school are broader and more closely related to life than those of the traditional school.

7. The proposition that education is always a function of time, place, and circumstance is supported by an examination of educational objectives, both stated and implied, over a period of several years.

8. Formulating a written statement of the philosophy of the school after

a period of study and exploration serves a useful purpose in giving the members of the staff a feeling of accomplishment and a sense of direction.

9. The study of educational objectives can best be initiated by having teachers list problems that come up naturally in the course of a few weeks or months in connection with their teaching.

10. The written statement of objectives of the school should (a) be clearly stated, (b) be limited to those objectives that the school has a reasonable chance of achieving, (c) be understood and accepted by teachers, pupils, and parents, (d) reflect social need as well as pupil ability and interest, (e) have unity and internal consistency, and (f) be susceptible of evaluation.

SOME PROBLEMS AND PROJECTS

1. Courses of study and curriculum guides typically include highly commendable objectives of elementary education. However, an objective may be translated into classroom practice by individual teachers in ways that reveal profound differences in interpretation of the meaning of the objective. Two sixth-grade teachers, for example, in connection with a study of colonial history, will probably devote some attention to the establishment of a new government in America. Each teacher will teach the topic in a way that he thinks furthers the objective, "Devotion to Democracy." Yet the learning activities that each plans for the class may be based upon very different conceptions of democracy, and of how we help children to become devoted to democracy.

Following are some activities planned by one teacher in connection with the study of the establishment of constitutional government in the United States. Will these activities further "Devotion to Democracy" as you understand this objective? Evaluate each from the standpoint of what it infers about the meaning of democracy or of its possible effectiveness in attaining the desired objective. Which activities foster misconceptions about present-day society?

a. Have individual children give special reports on why the Constitution was written, who the leaders at the constitutional convention were, how the Constitution became the law of the land.

b. Have children memorize the Preamble to the Constitution.

    c. *Discuss the three-part structure of our government, emphasizing the importance of a system of checks and balances.*

    d. *Have children make a diagram of the structure of our government, including on the chart the requirements for president, vice-president, representative, and senator.*

    e. *Have children read the Bill of Rights. Discuss, pointing out that in colonial days civil rights were not common to all as they are today.*

    f. *Have children read other amendments to the Constitution. Discuss, pointing out that citizenship and political rights were not always common to all as they are today.*

    g. *Have children in all three sections of the sixth grade organize the grade along the lines of the U.S. Constitution so that they may practice self-government.*

    h. *Have children learn how to operate a voting machine, or how to mark a ballot.*

    i. *Have children learn to regard the worth of the individual by listening courteously and not interrupting one another in giving reports.*

2. If Devotion to Democracy was one of your objectives in teaching the topic, "How Constitutional Government Was Established in the United States," what learning activities would you plan? For help in answering, read "American Ideals and Conflicts and the Social Function of the School" in *Social Foundations of Education*, William O. Stanley and others, eds. (Henry Holt and Company, 1956). The material in this reference will not discuss possible activities, but it will help to clarify the meaning of democracy as well as some of the issues involved in teaching in a democracy.

3. As one of her objectives for the social studies, Mrs. T wants her pupils to become acquainted with the "nicer" parts of town. "My children know only the slums," she says. "I want them to see the 'better' things of life so they'll have something to look up to. I plan to have them visit the library, the old Adams house, the Congregational Church, the new supermarket, and the First National Bank."

Is Mrs. T's educational objective a worthy one? Should the school attempt to raise the level of the lower socioeconomic class?

Is Mrs. T's method a sound one for carrying out her objective? Will children learn to want the "nicer" things in life by trips such as Mrs. T plans?

Is the teacher's attitude important in carrying out objectives? Does Mrs. T's statement imply an attitude that might make the carrying out of democratic objectives difficult?

4. Can you suggest more effective methods for raising the living stand-

ards of any specific group? Select an area such as food habits, for example. How would you go about getting your children to eat better breakfasts? Would health posters be effective? Asking the children what they ate for breakfast? Cooking and eating a model breakfast in school?

5. Suppose you were a member of the kindergarten group drawing up the objectives listed on p. 96. If you were to continue the list, what objectives would you add?

Evaluate your list when you finish. Are all your objectives set forth in terms of making children conform? Have you allowed leeway for the child who is different? Do your objectives encourage spontaneity and creativity? Do your objectives overemphasize the middle-class values of cleanliness, respect for authority, respect for property, etc.? Do your objectives include helping children to accept differences in people, including differences in personality, physical appearance, race, nationality, or religion?

6. Here is a list of objectives a group of teachers worked out for grade 4 in the area of health, to cover the school lunch program:

To have the children eat balanced meals, including several of the basic seven foods at lunch;

To have the children wash their hands before eating;

To have the children eat slowly and chew their food thoroughly;

To have the children chew with their mouths closed;

To have the children carry on a pleasant conversation at the table;

To have the children wait until everyone is served before eating;

To have the children refrain from talking when they have food in their mouths.

Which of these objectives are truly health objectives and which have to do with table manners? Should good manners and good health be taught together? Is there a danger in confusing the two in children's minds? Suggest how good manners can be taught without confusing them with good health.

Will the health program as set by these objectives be challenging enough intellectually for fourth-graders? Are they not ready for some understanding of the digestive system and of what different foods do for us?

SELECTED READINGS

ASSOCIATION FOR SUPERVISION AND CURRICULUM DEVELOPMENT, Organizing the Elementary School for Living and Learning (National Education Association, 1947). States and discusses at length four broad purposes of the elementary school.

CASWELL, HOLLIS L., and FOSHAY, A. W., *Education in the Elementary School* (3rd ed., American Book Co., 1957). Chapter 4 emphasizes the importance of clearly established aims, the sources of educational aims, and ways of formulating statements of aims of elementary education.

EDUCATIONAL POLICIES COMMISSION, *The Purposes of Education in American Democracy* (National Education Association, 1938). Analyzes the factors that influence educational objectives, reviews the outstanding statements of objectives, and proposes a new classification.

HERRICK, VIRGIL E., GOODLAD, JOHN I., ESTVAN, FRANK J., and EBERMAN, PAUL W., *The Elementary School* (Prentice-Hall, Inc,, 1956). Chapter 4 deals with the functions of objectives, statements of objectives in programs basically oriented to the individual, statements of objectives in programs basically oriented to society, and developmental tasks as objectives.

KEARNEY, NOLAN C., *Elementary School Objectives* (Russell Sage Foundation, 1953). Presents a list of educational objectives relating to knowledge and understanding, skill and competence, attitudes and interests, and action patterns.

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REHAGE, KENNETH J., "Deciding Upon Objectives," Association for Supervision and Curriculum Development, *Guidance in the Curriculum* (The Association, 1955), Chapter 3. Emphasizes the importance of formulating objectives; indicates that objectives should be based on studies of contemporary society, studies of learners, and contributions of subject-matter specialists.

RICHEY, ROBERT W., *Planning for Teaching* (McGraw-Hill, 1952). Chapter 14, "The Function of the School Today," stresses the importance of understanding the changing nature of community life today; presents ten educational principles underlying educational practices.

SAYLOR, J. GALEN, and ALEXANDER, WILLIAM M., *Curriculum Planning for Better Teaching and Learning* (Rinehart & Co., 1954). Chapter 7, "Outcomes Desired from School Experiences," reviews educational goals formulated by philosophers, professional groups, and teacher committees.

SHANE, HAROLD G., and McSWAIN, E. T., *Evaluation and the Elementary Curriculum* (rev. ed., Henry Holt and Co., 1958). Chapter 2 deals with the values to be sought with children in elementary schools and points out pitfalls to be avoided in preparing statements of objectives.

SELECTED FILMS

American Teacher. A 15-minute sound film directing attention to the importance of the teacher in the American way of life. Contrasts the education of yesterday with that of today. Stresses the importance of recognizing indi-

vidual differences in pupils and the effort to develop thinking rather than an accumulation of facts. March of Time.

Children Learning by Experience. A 30-minute sound film that presents a study of how children learn from the activities in which they participate in every-day life. Poses a number of questions, including, "When should the teacher or parent step in and when should the child be left alone?" "How can teachers and parents determine what experiences children should have?" British Information Service, Chicago.

Teacher as Observer and Guide. A 22-minute sound film picturing activities in six school situations which illustrate the following concepts: guiding and directing pupils in more satisfactory ways of solving their problems; developing artistic abilities; promoting the development of citizenship and character; and providing help for slow learners. Teachers College, Columbia University.

Broader Concepts of Curriculum. A two-reel sound film emphasizing four major concerns of the modern school. McGraw-Hill Films.

Curriculum Organization

☐ Studies of child growth and development, information about the realities and ideals of the culture, and statements of educational objectives all provide important guides to the selection of learning experiences. However, a mere collection of educative experiences is not sufficient. An important problem still remains: how to organize learning experiences so that each experience fits into a larger whole and contributes to the development of those behavior traits that are essential in our kind of society. The present chapter is concerned, therefore, with the problem of developing the design of the curriculum.

Organizing Learning Experiences

Planning the Curriculum Organization

Planning the curriculum organization for any elementary school involves the general acceptance on the part of the staff of what they expect to do for the boys and girls who attend the school. After this has been determined, the general framework of the curriculum can be developed and the specific experiences planned to fit into the over-all scheme. Too frequently the staff accepts without question the curriculum organization already in operation. This is understandable in view of the fact that the organization of many social agencies lags behind technological changes, and social institutions generally strug-

The function of organization is to set the stage and to facilitate the application in the classroom of the kind of education one desires for children and the method whereby children may get it.—HENRY J OTTO

gle along with outworn forms of organization suited to an age that has long since ceased to exist. Effort to modernize the organization of Congress, to eliminate obsolete county governments, and to develop larger local units of school administration are cases in point. A factor that operates to delay the development of more adequate curriculum organization is the widely accepted idea that a good teacher can achieve good results regardless of the organization. Although it is evident that no plan of curriculum organization can produce good results without good teachers, it is also true that the work of the best teachers can be hindered by a curriculum organization that does not permit the full use of their talents.

As we indicated in Chapter 1, the choice does not lie between a rigidly planned curriculum and a planless one. What is needed is continuous, co-operative planning by the local staff as well as by state and national agencies to keep the curriculum in harmony with current needs.

Principles of Curriculum Organization

Curriculum organization should be regarded as the means to help achieve the objectives of the school. There is no advantage in introducing an innovation in curriculum organization unless the school faculty sees clearly that the existing organization is out of harmony with the accepted objectives of the school. Since educational objectives are always in the process of modification and expansion as teachers gain new insights, the over-all design of the curriculum must likewise be subject to continuous study and modification; it cannot be completed at any given time. The following principles of curriculum organization should serve as useful guides for teachers engaged in such a study.

Curriculum organization should help to coordinate the efforts of teachers

The program must be arranged so that the various staff members who work with the same group of children will supplement rather than duplicate one another's efforts. What one teacher does for the child must be determined to some extent by what other teachers have done for him and by what future teachers are expected to do.

Curriculum organization should provide a well-balanced day of living for boys and girls

Opportunities for the systematic study of subject-matter areas as well as for work on units that cut across subject-matter lines should be provided.

Experiences that develop understanding and insight as well as provision for systematic drill when it is needed should also be provided. *Periods of strenuous activity should be balanced by periods for rest and relaxation, opportunities for self-expression and initiative should be balanced by experiences in conforming to group standards, and provision should be made for children to work on individual as well as group projects.*

Curriculum organization should provide for continuity in the learning experiences of the child.

The newer psychology of learning furnishes many guiding principles for curriculum organization. Among these principles are: *(1) learning is growth rather than a mere accumulation of knowledge and skill; (2) growth and development are continuous; (3) individuals differ in their rates of growth; and (4) learning is experiencing.*

The sequence of experiences found in many elementary schools violates these principles. The ladder system of grade placement, which dictates that long division be completed in one grade and fractions in another; the idea that reading should be taught only in the elementary school; the assumption that all children who enter school at the same time will be ready to begin reading at a given time; and the contention that economics is so complex and difficult a subject that it should not be taught until the student is in college—all of these are in direct contradiction of the principle of learning as continuous growth. Minimum grade standards, annual promotions, and the class-as-a-whole method of teaching are other examples of the failure to observe generally accepted principles of learning. These examples show that a curriculum organization that achieves continuity in the materials to be taught frequently results *in no continuity at all for the learner.*

The elimination of school subjects and the substitution of experiences based on immediate felt needs of pupils does not solve the problem of continuity. Curriculum experiences need to be planned *in such a way that they help the child to understand increasingly more complex materials and to master increasingly more effective skills of expression.* They need to move gradually from what is familiar and concrete to what is remote and abstract. For example, the development of social concepts, such as interdependence, tolerance, and democracy, begins with the immediate social group, the family, and moves gradually to more complex situations involving larger groups. Such concepts cannot be mastered once and for all at any grade level; they must recur again and again in different and increasingly more mature contexts. The point at which the child is ready for a certain level of difficulty in the understanding of concepts or the mastery of skills is determined not by

the number of years he has been in school but by his own pattern of growth and by his background of experience both in school and out of school.

The following excerpt shows how the continuous-growth concept of curriculum organization is finding its way into school practice.

> The children in a third-year group at the Jackson School, St. Louis, Missouri, have had no "ends and beginnings" in their school life. They have had the same teacher since entering kindergarten. The teacher frequently comments concerning the improvement of their work over that of former years. During these years the children have had many common experiences on which they can call to form the bases for new learnings. Growth in learning has replaced the motivation to "pass." Children do not know what grades they are in and do not worry about it. No feeling of being "different" from other children was observed. The teacher makes a grade classification for children who are transferred to other schools.
>
> Many advantages of this procedure could be seen during a visit to this classroom. For example, the children asked the teacher to tell a certain story which they had heard before when they were in the kindergarten. And she knew how to tell it again in order to bring out new values based on learning. This teacher would often praise the boys and girls on how much better they were writing than they did last year or two years ago or how much better they were able to use sentences.[1]

The illustration given above could be duplicated over and over from descriptions of school practices in every section of the country where the school staff has adopted the policy of organizing the curriculum in such a manner as to foster the continuous growth of children.

Curriculum organization should provide for unified learning

Many critics of education have pointed to the failure to develop individuals who can bring anything but a specialized orientation to problems and issues. Other critics have been concerned about the failure, as they see it, to focus attention effectively on specific content, problems, and skills. Thus, teachers and principals face a perennial conflict between those who urge specialization and those who see the need for integration.

The point of view has already been expressed in this book that provision should be made for both the direct teaching of subjects and for broad, meaningful experiences for children—experiences that cut across subject lines. Because experience has shown that learning in the subject areas is more effective as well as more meaningful when provision is made for seeing the interrelationship between various subjects, many elementary schools provide for

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[1] Educational Policies Commission, *Education for All American Children* (National Education Association, 1948), pp. 225–226.

both the teaching of subjects at regular periods and for long, uninterrupted periods for planning and working on problems or units which challenge children and at the same time utilize subject matter and activities from many sources.

Curriculum organization should provide for the development of fundamental skills

Effective living depends upon the use of specific abilities and techniques, especially those that relate to language and number. Some elementary schools have emphasized the mastery of these skills through the process of memorization and drill to the exclusion of equally important educational objectives. There is a great need for a re-examination of the whole problem of what skills are important and what methods are best for developing fundamental skills economically. For example, certain social skills, such as cooperation, leadership, and work habits, are important as well as skill in computation or in spelling. Furthermore, it is possible that a more economical method of developing mastery of multiplication combinations lies *in their use in meaningful situations rather than in memorization of the multiplication tables.*

However, the fact must not be overlooked that the direct teaching of certain complex skills is essential. For example, research by Hanna and others indicates that it is not possible to teach arithmetic satisfactorily solely through an activity program.[2]

Curriculum organization should provide for pupil participation in curriculum planning

It has been suggested earlier that the broad outlines of the curriculum be planned by the entire school staff with the cooperation of laymen in the community. However, the individual differences existing among groups of children make it necessary to leave the selection of specific experiences to each teacher and the group of children she teaches. That children should participate in the planning of learning experiences follows naturally from the democratic concept of learning and teaching. Children grow in the ability to participate in democratic social living only as they share in planning the activities in which they participate in school and elsewhere. Teachers grow only as they participate in planning the educational program. Participation

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[2] Paul R. Hanna, "Opportunities for the Use of Arithmetic in an Activity Program," in *Teaching of Arithmetic* (Tenth Yearbook, National Council of Teachers of Mathematics, Teachers College, Columbia University, 1935), pp. 85–120.

is therefore one of the most important words in modern educational literature.

Types of Curriculum Organization

The development of the general design of the curriculum has been given much attention for several decades in educational literature and in educational conferences. Many terms have been used to designate innovations in curriculum organization. Correlation, fusion, broad fields, the core curriculum, integration, and the experience curriculum have all had stanch defenders and relentless critics. Actually, it is seldom if ever possible to find any one of these types operating in pure form in a given school. Frequently a paper organization is given one of the above labels with no realistic counterpart to be found in actual practice.

> The important thing is whether [this] structure permits instruction and activities needed to serve the objectives of the school, and not how it can be classified. Since the nature of the general organization of the curriculum determines what can be done in the classroom, the dominant organization of the program should be flexible enough to permit a variety of specific approaches to curriculum and teaching. This cannot be done by an obstinate loyalty to a given form, no matter what its merits are.[3]

Nevertheless, in order to have some basis for making practical decisions, the elementary-school teacher needs to know the general characteristics of the principal types of curriculum organization.

Separate-subjects organization

The type of curriculum with which most adults of today are familiar is the one in which school subjects constitute the basis for organizing the school experiences of children. This type of curriculum organization was characterized by Meriam in 1920 as aimless, lifeless, disconnected, congested, wasteful, and untimely.[4] It was not unusual for the elementary-school child to be taking as many as fifteen subjects during one school term. The list usually included reading, writing, spelling, language, arithmetic, history, geography, civics, physiology, hygiene, nature study, music, art, manual training, and domestic science. With this multiplicity of subjects, with content in each selected on the basis of logical arrangement, with little regard for the concerns of children, and with memorization of the text as the dominant

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[3] Hilda Taba, "General Techniques of Curriculum Planning," in *Forty-fourth Yearbook, Part I, National Society for the Study of Education, Curriculum Reconstruction* (University of Chicago Press, 1945), p. 108.

[4] Junius L. Meriam, *Child Life and the Curriculum* (World Book Co., 1920), p. 52.

method, it is not difficult to see why leaders in education have long been demanding a fundamental reorganization. Fortunately, the separate-subjects type of organization described above probably cannot be found in pure form in very many elementary schools today.

Innovations in curriculum organization have resulted in the main from a desire to provide more reality and more unity in the school experiences of children. Most of the criticism of the separate-subjects type of curriculum organization reflects this desire. The need for an organization based more directly on the *actual problems of living* was stressed by the committee that prepared the third yearbook of the John Dewey Society.

> It is the conviction of the Committee that the mere selection of a new group of subjects will fail to meet the educational needs of contemporary living. We believe that a fundamental reorientation must be accomplished, one that cuts through the academic departmentalization of knowledge, one that centers the life of the school around the basic problems of actual co-operative living—health, leisure, work, conservation of material resources, effective utilization of human resources, and the like.[5]

The need of an organization based more directly on the unitary nature of child development was indicated by Melvin:

> It [the separate-subjects organization] does not offer a satisfactory scheme for the organization of teaching which is based on the unity of personality and of the development of individual experience. It is a leftover from a type of culture which is rapidly passing away, an outworn garment no longer fit to wear.[6]

The core curriculum and life-adjustment education at the high-school and college levels reflect the desire to develop a curriculum organization more in harmony with the realities of contemporary living and the characteristics and needs of youth.

Correlation

One of the earliest attempts to bring about a more unified curriculum organization was the policy of teaching similar topics in two or more subjects simultaneously in an effort to help pupils gain a better understanding of such topics. For example, the colonial period in history and the New England states in geography were taught during the same six-week period so that what was learned in one subject might be related to what was learned in the other. Music and art were correlated with the social studies in a similar manner. Under this plan just as many subjects are taught as ever and *it is*

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[5] John Dewey Society, Third Yearbook, *Democracy and the Curriculum* (D. Appleton-Century Co., 1939), p 412.
[6] A. Gordon Melvin, *Method for the New School* (The John Day Co., 1941), p. 19.

obvious that the procedure represented only a very short step toward a unified program.

Fusion

The fusion, or broad-fields, type of organization divides the school day into periods for broad fields, such as language arts, social studies, science and health, arithmetic, and arts and crafts instead of providing a separate period for each specific subject, such as reading, spelling, penmanship. This procedure has several advantages over the separate-subjects type of organization. First, it provides for longer periods of uninterrupted work and makes pupil-teacher planning easier. Second, it makes it easier for pupils to see the relationship existing between such subjects as spelling and writing.

The plan has very little value, however, if it is used merely as a device for teaching the same subject matter in the same way as before with a new label. If it is used to center attention on the needs and interests of children and to select materials accordingly, it holds possibilities for real progress.

Integration

A fourth type of curriculum organization entirely eliminates school subjects and broad fields of subject matter and organizes the work of the school around normal child activities, major functions of social life, or felt needs of pupils. The designation that is frequently given to this type of organization is the "integrated curriculum." This designation is sometimes criticized as representing a misuse of terms, since it is individuals rather than subjects that are becoming integrated. The term "integrative curriculum" is perhaps psychologically sounder, since it indicates that the end sought is the integration of the individual both within himself and with his environment.

The integrative curriculum has taken three forms, which differ slightly from one another in the selection of a basis for organizing the daily program of the school and in the extent to which the framework of the curriculum is planned in advance.

THE CHILD-CENTERED CURRICULUM. In the early child-centered schools the curriculum was organized around normal child activities, such as play, construction, excursions, and stories. Dewey, Meriam, and Collings have written detailed descriptions of school programs using this type of organization.[7]

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[7] See the following references: John Dewey, *School and Society* (University of Chicago Press, 1915);
Junius L. Meriam, *op. cit.*;
Ellsworth Collings, *An Experiment with a Project Curriculum* (The Macmillan Co., 1923).

THE SOCIAL-FUNCTIONS CURRICULUM. Later attempts to eliminate school subjects from the curriculum used major functions of social life as the basis for organizing learning experiences. The *Virginia Course of Study for Elementary Schools*, published in 1934, was organized around areas of living such as protection, conservation, production, consumption, communication, transportation, recreation, *expression of esthetic impulses,* and expression of religious impulses. Centers of interest were listed for each grade such as home and school life for the first grade and community life for the second grade. Although a plan similar to this is frequently used for organizing the social studies program, the use of this scheme for organizing the entire program of the elementary school made little headway. In 1949, Shores reported that there was a trend toward research in elementary education centered on studies of child growth and on the improvement of instruction in the subject areas of the elementary-school curriculum.[8]

The social-functions curriculum probably provides opportunity for the greatest amount of integration of learnings. Under such a plan, traditional subject-matter lines disappear and teacher and children draw upon whatever discipline can contribute to the solution of problems that are being studied. For example, a fifth-grade class might study a unit, *How the Early Pioneers Moved Westward.* Such a unit would draw heavily upon traditional subjects like geography, history, economics, and sociology. But there are many science learnings that would also be included. Questions relating to weather and climate, animal life, vegetation, desert regions, and the like might be answered by drawing freely upon both the physical and biological sciences. Children would also learn and practice many reading-study skills as they searched for information about early methods of transportation and prepared reports. The children might spend the large block of time set aside for work on the unit on any one or more of these kinds of experiences. On some days learning activities might draw more heavily upon geography or history as we know them traditionally, but on others the emphasis might be on science, the language arts, or the fine arts.

THE EXPERIENCE CURRICULUM. *Beginning as far back as the time of Rousseau and continuing to the present, educators have been emphasizing the immediate felt needs of children as a basis for educational planning.* The child-centered school movement, which reached *its heights in the 1920's,* served a useful function by calling attention to the interests and purposes of children and by providing a plan of organization based primarily on those interests and purposes. Without losing sight of the concerns of children, the social-functions approach, which developed later, represented an effort to give the school program a social orientation that seemed to be neglected by the advocates of the child-centered school.

[8] J. Harlan Shores, *Elementary School Curriculum Organization, 1890–1949* (College of Education, University of Illinois, 1949).

A still more recent innovation has been called the experience curriculum. This type resembles the child-centered approach in that it uses the concerns of children as the basis for organizing the work of the school. It differs from the earlier child-centered programs in its view that the interests and needs of children cannot be anticipated and that therefore no curriculum framework can be agreed upon for the school system. The earlier child-centered programs, on the other hand, set up in advance certain areas of normal child activity and to that extent planned the framework of the curriculum beforehand. It should be pointed out that even these earlier child-centered programs emphasized the value of curriculum planning "on the spot" by each teacher and his group of children, but this planning of details of projects and procedures existed within a curriculum framework set up in advance.

The basic philosophy underlying the experience curriculum may be summarized as follows:

1. It eliminates school subjects and subject-matter areas as the determining factors in curriculum organization.

2. It regards education as the continuous growth of the whole individual toward intelligent participation in the life around him.

3. Since the environment is constantly changing, the curriculum cannot remain static; instead, it must be a series of experiences offering possibilities for growth and understanding which will help the child meet future problems of living more effectively.

4. The curriculum begins with the interests and felt needs of children.

5. Growth depends upon the active participation of the child in activities that are in line with his own interests and felt needs.

6. It is the problem of the teacher to arrange the environment so that the child will be stimulated to active participation in growth experiences.

7. It is impossible for the teacher or a group of teachers to set up these growth experiences in advance; that would force the child to pursue the personal goals of others rather than his own goals.

8. Subjects or subject-matter fields do not represent the curriculum; rather, they represent resources that may be drawn upon as they assist the child in the solution of a problem of his own choosing.

9. It does not neglect the problem of orienting the child in the culture around him, since felt needs of children correspond closely to social problems and arrangements.

10. The only way for the child to gain social understanding, social sensitivity, and social skills is to meet effectively the social situations that arise from day to day. Take care of the present and the future will take care of itself.

The arguments usually advanced by those who are opposed to the experience curriculum can be summarized as follows:

1. *Felt needs of children do not alone provide an adequate basis for curriculum organization.* The characteristics of the society in which the school exists impose certain obligations on the school which cannot be escaped if education is to be effective in meeting problems of living. Immediate felt needs of children do not assure a desirable breadth of experience.

2. *Felt needs of children do constitute powerful motivations for learning,* but teachers can anticipate these needs by reference to the studies of child development and by continuous study of the children in a specific school with sufficient accuracy to plan a general framework for the curriculum.

3. *Felt needs of children must come from somewhere.* "There is no spontaneous germination in the mental life." Rather than follow out immediate felt needs of children over long periods of time to the exclusion of more important matters, it is the responsibility of the teacher, on the basis of a greater background of experience, to furnish guidance to pupils in the development of worth-while interests. The teacher is not helpless in the face of a group of children with limited, superficial, and passing interests. He has the responsibility not only for discovering interests but also for developing new ones.

4. *Over-all curriculum planning is essential to assure continuity in the school experiences of children.*

Logical and Psychological Organization

Attention has been called in Chapter 1 to the need for maintaining a balance between extreme points of view in regard to educational problems. Our analysis of general types of curriculum organization points up the need for such a balance. Confronted with a curriculum organization that was based almost exclusively on the logical organization of subject matter, some *educational reformers have gone to the* opposite extreme of advocating the elimination of subjects from the school program. There is considerable evidence from both educational theory and educational practice that neither of these extremes is sound. Taba points out, for example, that recent experiments and research have shown that "both the logic of ideas and a psychologically sound learning sequence need to be taken into account in organizing the curriculum." [9] Lee and Lee state that it is the consensus that "a few clever teachers can develop necessary skills in connection with the unit, but that most teachers find it necessary and desirable to have a period in which unrelated skills are taught." [10]

The Pasadena City Schools, *which in 1936 were by no means regarded*

[9] Hilda Taba, *op. cit.,* p. 101.
[10] J. Murray Lee and Dorris May Lee, *The Child and His Curriculum* (Appleton-Century-Crofts, 1950), p. 239.

as formal schools, provided suggestions for teachers regarding the use of experience units in each grade but supplemented these with suggestions for additional experiences relating to each of the major curriculum areas.[11]

Stratemeyer and associates have presented a plan for organizing learning experiences in terms of persistent life situations and the ways learners face them. They conclude, however, that opportunities should be provided for studying subject matter as an organized body of knowledge when this is needed.[12]

Hanna and his associates examined a large number of activity programs and found that the number of arithmetic experiences provided per week was very small. They concluded that "functional experiences of childhood are alone not adequate to develop arithmetic skills."[13]

The evidence above reinforces the suggestion made several times in the preceding pages that the teacher in the modern elementary school must be prepared to direct the learning experiences of children in various types of organization. To achieve certain kinds of outcomes, the learning experience may exhibit more of the qualities of direct teaching of subjects, whereas to achieve other outcomes it may have the characteristics of the experience curriculum.

Purposes of the Unified Program

Various terms have been used in referring to the unified learning program. Experiences that reach beyond subject-matter boundaries and utilize pupil initiative and cooperation have been called *projects*, *enterprises*, *activities*, and *units*. Although educational psychologists and child development specialists have recently provided a great deal of data that support unified learning, the idea itself is not new. Good teachers have from time immemorial included the major features of the program in their work with children.

Comenius, in the sixteenth century, spoke out against the formal educational methods of that day. Later, Rousseau advocated teaching through natural experiences and Pestalozzi demonstrated the method of teaching that utilized realistic work projects. In this country, Bronson Alcott introduced the activity program into the schools of Concord, Massachusetts, as early as 1859. Francis Parker introduced socializing experiences and activities emphasizing pupil interest and activity into the schools at Quincy, Massachusetts, where he was principal from 1875 to 1880. John Dewey established the Uni-

[11] *Suggestions to Teachers in Guiding Pupil Experiences* (Pasadena City Schools, Pasadena, California, 1936).
[12] F. B. Stratemeyer and associates, *Developing a Curriculum for Modern Living* (Teachers College, Columbia University, 1957), p. 408.
[13] Paul R. Hanna, op. cit., pp. 85–120.

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[13] Paul R. Hanna, op. cit., pp. 85–120.

versity Experimental School at the University of Chicago in 1896 which emphasized pupil activity, pupil purposes, and problem-solving. The unified-learning philosophy prevailed in the Horace Mann and Lincoln schools at Teachers College, Columbia University, which were established in 1900 and 1917 respectively.

Some of the values teachers hope to achieve through the unified program are:

1. Skill in the use of techniques involved in democratic living;
2. Mastery of the three R's in connection with problems that are directly related to the interests of pupils;
3. Providing a sufficient variety of experiences to meet the needs of all pupils;
4. Capitalizing on the relatedness of learning experiences;
5. Discovering the potentialities of each child and helping him to develop them;
6. Achieving a better synthesis of learning that comes from home, school, and community;
7. Providing opportunities for the child to take an active part in planning, executing, and evaluating learning experiences.

Scheduling the Unified Program

Since most elementary schools find it desirable to devote a part of the school day to unified experiences and the remainder of the day to the teaching of subjects, attention must be given to the problem of dividing the time between these two phases of the instructional program. No hard-and-fast rule can be given for determining this ratio. In a few schools the problem has been solved by dividing the time equally between the two phases—that is, one half of the day is given to the unified program and the other half to the teaching of subjects. *There appear to be sound psychological reasons for a distribution of the time in accordance with the maturity of the children rather than on the basis of an arbitrary equal division.* Purely academic activities quite appropriately hold a large place in the education of young children, but such activities probably gradually diminish in educational importance from childhood to adulthood. It has frequently been pointed out that in addition to providing for general education through the program of unified studies, the elementary school has the responsibility for helping children to develop specialized interests and to gradually become acquainted with the demands of the various fields of specialization. *The child's interests, which at first are general and highly utilitarian, gradually become more specialized and intellectual.*[14]

[14] Hollis L. Caswell and Doak S. Campbell, *Curriculum Development* (American Book Co., 1935), pp. 275–286. See this reference for a more detailed discussion of this problem.

Learning to Work with Others

Educators have long been convinced that if pupils are to be educated for democratic citizenship they must have the opportunity to practice democratic living in the classroom. However, we have not always been able to agree on the kinds of practices that will foster our goal of democratic citizenship. Some teachers use voting as a technique for training in democracy; they have had pupils settle issues—over what to serve at a party or whose picture is best—by counting noses. Some teachers set up a voting booth in the classroom because they feel that knowledge of voting procedures promotes democratic citizenship. Such techniques, although they may be useful on occasion, can hardly be said to foster the essence of good citizenship. What we need, instead, is to help pupils know the rights of self and others in a democracy, and to know the historical evolution of these rights. Then we need to provide situations in which pupils can practice democratic living. In today's schools many opportunities are provided for children to work in groups, on the theory that small-group work provides a setting in which children can learn to respect the rights of others and to take responsibility for their own actions.

In this picture, a committee of sixth-graders is meeting with the teacher to plan the classroom newspaper. Standards for narrative and expository writing have been previously set up in language arts class. Once a week the teacher meets with the group in a writing clinic devoted to the improvement of written expression. At the other times during the week, the pupils meet without the teacher to plan details of production and to allocate responsibility. However, a teacher should not assume that because pupils are working in small groups they are practicing democratic skills. The Chinese Communists also practice group living but not the skills we identify as democratic. Careful guidance is necessary if people are to develop the concern for the rights of others essential to democracy as we know it.

© (Photo by Henry G. Bookstaber, Art Supervisor, courtesy Ridgewood Public Schools)

The Second Grade Plans a Field Trip

Popular interpretations of John Dewey's belief that "children learn to do by doing" have sometimes resulted in an activity becoming extremely popular in the schools simply because it supposedly represents learning by doing. Thus we have fashions in education; certain activities become "the thing to do" and represent the earmarks of an up-to-date teacher.

Field trips are well worth while when properly used, but they are sometimes included in the school program only because they are "the thing to do."

Such trips can be the frosting on the cake, providing fun but adding little to the nutritive value of the curriculum, or they can be a valuable addition to other means of instruction. They can be used as diversion, or to illustrate a principle, to find answers to questions, and to provide firsthand experiences that will make book learning come alive for children.

But they can serve these purposes only if they grow out of the classroom program and are carefully planned for by teacher and pupils. Hastily organized trips, or trips with so vaguely defined a purpose as "going to see a farm," have no place in the curriculum.

Here teacher and pupils are planning what they will look for when they visit the wholesale market. Is such a planning session the first the teacher would hold? What other kinds of planning need to be done, perhaps even prior to this session?

A discussion of what to look for and what questions to ask makes the trip more purposeful. Such a discussion helps pupils to anticipate the trip in their minds and makes the trip theirs, rather than the teacher's.

When they return from the trip, teacher and pupils will have a follow-up session, in which they discuss the trip and share impressions and information. Perhaps a part of the trip may be reproduced in art or in story form. The teacher will beware, however, of *always* having her pupils draw a picture of what they have seen or *always* having pupils write a report about what they have learned. Can you see why?   © (Photo: Los Angeles City Schools)

work. When a teacher works with a group of children for only a brief period each day, there is very little opportunity to take them on trips or to use other methods of accomplishing this objective.

In the face of increasing demands to improve the schools, some systems are returning to patterns of organization that defeat the objectives of the school. Departmentalized instruction is being extended downward even into the primary grades in some parts of the country. The departmental plan is being substituted for the self-contained classroom in which one teacher is responsible for all areas of instruction with the help of specialists in certain fields such as music and art. Under one version of the departmental plan, a teacher teaches reading, other aspects of the language arts, social studies, and arithmetic to one class of children in the morning. A number of specialists take over in the afternoon and the children are taught music, art, science, and physical education. Meantime, the regular teacher meets another class in the afternoon to instruct them in the same subjects she taught to her morning class.

One of the arguments advanced in favor of the departmental plan is that it results in improved instruction because the children have the benefit of a teacher who is a specialist in the field. Whether instruction is actually improved is questionable. In fact, the special teacher operating under this system is faced with a number of difficult problems. It is rarely feasible for her to relate the subject she teaches to the subjects taught by the regular teacher, except in a very general way. For example, the reinforcement of learning that comes when the classroom teacher can stress in the science class the same point about critical thinking that came up in the social studies class is lost. Also, the special teacher works within strict time limits; she must finish her lesson at the moment the bell sounds, for another special teacher is waiting to take over when she finishes. Her lessons tend to be too mechanized; she cannot wait for children to think out solutions to problems; she must give them answers or she will not finish before the bell rings. She cannot plan for very much continuity from lesson to lesson, for with so many classes to face, each lesson must be planned as a rather complete unit. Furthermore, the special teacher cannot get to know each child as well as the teacher in the self-contained classroom. Hence, problems of motivation and individual guidance do not receive the same attention as they do in the self-contained classroom.

In many schools that use the self-contained classroom plan of organization, teachers who feel inadequate in certain areas work out informal arrangements to exchange with other teachers. For example, a first-grade teacher who is gifted in music may exchange with the teacher across the hall who is gifted in art. Some school systems employ consultants in music, art, foreign language, science, and physical education to assist classroom teachers in these

fields. Such arrangements are more likely to result in improved instruction than the conveyor-belt system of education.

Scope and Sequence in the Unified Program

If the purposes of the program of unified teaching are to be achieved, attention should be given to the selection of areas of experience to be included in the program and to the sequence of the specific experiences. The plans for meeting this problem differ considerably from school to school but, in general, the scope is determined by the basic activities in which human beings engage, the values the society fosters, and the major problems it faces. The sequence is determined on the basis of the developmental needs of children living in a certain environment.

No school or teacher can borrow and use uncritically the plan used in another school. The leadership in each school must provide continuous opportunity for the entire staff to study and discuss the demands of present-day living, the nature of child growth and development, and the learning experiences that will enable every child to meet the problems he faces individually and as a member of a society. However, an examination of the programs developed in several schools may be of real value to the local staff in planning the over-all framework of the curriculum.

The Educational Policies Commission report, *Education for All American Children*, contains an excellent summary of the scope and sequence used in several elementary schools.[17] According to this report, the elementary schools in Rochester, N. Y., Newton, Mass., and Battle Creek, Mich., emphasize geographic or historical interests, as follows:

First year:	human activities suggested by the life of the children's homes and their schools
Second year:	the neighborhood of which the school is the center
Third year:	the local community
Fourth year:	the state
Fifth year:	the United States
Sixth year:	the Western Hemisphere or the entire globe.

The elementary schools in Crawford County, Pa., Topeka, Kan., San Francisco, Calif., and the State of Arkansas stress comparisons between those cultures using mechanical power and complex machines and those cultures using muscle power and simple tools. The following sequence is suggested:

First two years: activities of home, school, and neighborhood.
Third and fourth years: human activities in simpler communities.
Fifth and sixth years: our contemporary world community. How the food

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[17] Educational Policies Commission, *op. cit.*, pp. 115–119.

we eat, the music we enjoy, the news we read result from the application of modern technology to the full range of the earth's resources.

In many schools the social studies have formed the basis for the unified-studies program; in others science, health, and the arts and crafts have been included; still other schools have used significant problems of living that have meaning for children, without much concern for keeping experiences within the boundaries of any conventional school subject.

Hildreth makes the following suggestions in regard to the selection of units for the unified program:

> Most schools where unified teaching has prevailed for some years tend to plan the year's work around units that have stood the test of thorough trial. After several years' experience with a unit, the school begins to build up a library and stock of materials that insure success in teaching the unit. Consequently, it is more convenient and economical to develop certain units over and over, at the same time maintaining flexibility and variability, and avoiding ritualistic treatment that results from planning the entire unit in advance. In most experimental laboratories and new type schools a basic sequential pattern for unit teaching is followed through the grades. In the primary grades they move out into the neighborhood and the community in ever-widening circles; then they spread to distant places, foreign lands, and historical eras, at still higher levels.[18]

The possibilities for teacher initiative in developing units of work centering around significant problems of living, utilizing the interests of children in local events and situations, and meeting the growth and development needs of children will be discussed in the next chapter. The direct-teaching phases of the instructional program will be presented in Part Three.

It should be emphasized here that the direct-teaching phase is closely related to the unified program so that knowledge and skills for which the child finds a need in the unit of work can receive systematic attention in the portion of the school day devoted to the teaching of subjects. Moreover, devoting a portion of the school day to the teaching of school subjects does not mean that these subjects must be taught in a formal, abstract, and meaningless fashion. The teaching of school subjects has been influenced greatly in recent years by (1) the elimination of content and skills that do not function in everyday life, (2) the substitution of broad fields of experience for isolated subjects, (3) recognition of the contributions a subject can make to the personality development of the child, (4) the development of readiness before the actual teaching of a topic begins, (5) adjustment of the work to the maturity level of pupils, regardless of grade standards, (6) a great increase in the number, variety, and quality of books and other instructional materials, (7) comprehensive, continuous, and cooperative evaluation of pupil progress,

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[18] Gertrude Hildreth, *op. cit.,* p. 92.

and (8) the development of curriculum guides for each area of experience by local committees.

Curriculum Organization as a Panacea

It was suggested earlier in this chapter that changing the form of curriculum organization does not of itself improve the elementary-school program. It should be emphasized that the essential features of a good elementary school include the following: (1) good teachers, (2) good buildings, (3) good instructional materials, (4) good leadership, (5) good curriculum organization, and (6) good community relations. *Efforts to improve the organization of the elementary-school curriculum will produce better educational opportunities for children only to the extent that they are accompanied by improvements in teacher education, including a minimum of five years of professional preparation, increased salaries for elementary-school teachers, reduced enrollments per teacher, better financial support for elementary-school building programs from local, state, and federal sources, and the same degree of personal freedom and community respect for teachers as that accorded to physicians and other competent professional people.*

Summary

1. The organizing of learning experiences so that each experience will fit into a larger whole and contribute to the development of those behavior traits that are essential in our kind of society represents an important phase of curriculum improvement.

2. Planning the general framework of the curriculum involves an understanding and general acceptance on the part of the staff of what they expect to do for the boys and girls who attend the school.

3. No plan of curriculum organization can produce good results without competent teachers; however, the work of excellent teachers can be hampered by a curriculum organization that does not permit the full use of their talents.

4. The curriculum organization should (a) be based on continuous, cooperative study and planning, (b) provide a well-balanced day of living for children, (c) provide for continuity and sequence in the learning experiences of the child, (d) facilitate the orienting of the child to the life about him, (e) provide for unified learning, (f) provide for the development of fundamental skills, and (g) provide for pupil participation in curriculum planning.

5. General types of curriculum organization include (a) separate subjects, (b) correlation, (c) fusion and integration.

6. The integrative curriculum may take the form of (a) the child-centered curriculum, (b) the social-functions curriculum, or (c) the experience curriculum.

7. The important concern is not what label is attached to the curriculum organization but whether the structure permits instruction and activities that serve the objectives of the school.

SOME PROBLEMS AND PROJECTS

1. "We have an integrated curriculum," explains Miss Armstrong to the visitor. "Each year I spend quite a bit of time with my sixth-graders at the beginning of the year, talking with them about their summers and their life outside of school. Out of that period some interesting study usually emerges. This year it has been hobbies. We've spent two weeks so far on a unit on hobbies and it has been fascinating. The children have brought in some wonderful collections."

The collections were interesting and varied. They included rock samples, butterfly specimens, matchbox covers, hotel soap wrappers, trading cards, antique dolls, pictures of old railroad trains, and many others. The visitor could also see that the group had written compositions describing their collections, had had a "sharing time" each day to talk about them, had tracked down the geographical, historical, botanical, or biological background of their specimens, as the case might be, had written business letters for additional specimens, and were now planning a school assembly during which their study might be explained to the whole school.

According to the analysis presented in this chapter, which curriculum-organization pattern is Miss Armstrong following? According to her philosophy, what should determine content in the elementary school? Analyze this philosophy critically.

Is there any educational justification for a study of hobbies in the sixth grade? Does the goal "Education for wise use of leisure time" justify it? Is there enough intellectual content to such a study? How might Miss Armstrong have handled the children's interest in collections without making it the center of interest? Would a 15-minute period once a week have sufficed?

2. Miss Armstrong's philosophy with regard to curriculum is typical of

that of many teachers in the child-centered tradition. It is not so much that she is opposed to children studying something they dislike—her own class has arithmetic, spelling, and formal grammar regularly, although each of these subjects is disliked by some pupils—as it is that she lacks conviction in any body of social knowledge and so follows pupil interests.

In this volume it has been consistently pointed out that curriculum experiences must be selected on the basis of the characteristics of children and the realities of our social order. Taking these two factors into consideration, which of the following units, which Miss Armstrong's class has studied in years past, could be justified, which would you eliminate, and for which would you need additional information before deciding?

    a. *Hawaii, Our Newest State*

    b. *How Our Local Community Supports Itself Financially*

    c. *The Reconstruction Period in American History*

    d. *The Life of Dwight D. Eisenhower*

    e. *Beautifying Our Community*

    f. *Baseball—Its History and Present Status in Our Society*

    g. *Living on a Budget*

    h. *The Germ Theory in Medicine*

    i. *Community Health Problems*

    j. *The United Nations.*

3. Here are the records of morning activities in three fifth-grade rooms in Skidmore School:

Teacher A

Unit Activities: Pupils decide what activity they will carry on in connection with pioneer study during period. Some elect to paint, some to work on a mural, some to model in clay, some to read.

Outdoor Recess: Children may play whatever they wish.

Language Arts: Pupils decide what they will do during period. Some write stories, some work on reports, some read, some look at room exhibits.

Music: Pupils may listen to records, use rhythm instruments, practice rhythms, or sing in small groups.

Teacher B

Reading: Children read assigned pages in history text and answer questions.

Outdoor Recess: Children play games as directed by the teacher.

Language Arts: Children discuss lesson in workbook and do written assignment. Children study spelling and take spelling test. Children practice handwriting.

Music: Children sing familiar songs. Children learn to read notes of a new song.

TEACHER C

Unit Activities: Pupils read in small groups to find answers to questions previously raised about pioneers. All pupils read on some problems, but books are on different reading levels. Teacher helps one group with index skills. Pupils pool information and plan next steps.

Outdoor Recess: Children play games of own choice.

Language Arts: Children continue creative writing efforts previously begun. Some read theirs aloud to class for help. Some who are finished correct theirs under teacher's supervision and begin to recopy.

Music: Children practice folk songs for festival. A mother of Swedish origin comes in to help with pronunciation of the words of a Swedish song the children are to sing.

Which morning program appears to be too much teacher-dominated? Which one too little?

4. What do you think are likely to be the effects of a program in which the children have to make too many choices? Of a program in which they rarely can make a decision?

5. Analyze each morning's program in the preceding question from the standpoint of balance of activities. If it is desirable to alternate quiet and active periods of work, which teachers have planned a morning that meets this criterion?

6. Break down each activity into the three classes in terms of subject matter. Would the learnings be classified as penmanship, reading, spelling, art, or what? Which program offers the richest learning experiences for every child in the room? Which permits students to escape unpleasant tasks if they choose?

7. The fusion of health and safety with science into a broad-fields curriculum has had wide acceptance in recent years. It has eliminated needless repetition and has resulted in more efficient and more effective teaching. The fusion is possible because health and safety learnings are derived from the sciences. For example, to find the reasons for not shedding sweaters after exercising or for changing wet clothing as soon as possible, pupils must study the physical sciences. To find out how to protect the body from harmful organisms, pupils must study the biological sciences.

Pupils in the elementary school do not, of course, study physics and

biology as formal subjects. Instead, in unified teaching, the curriculum is often organized around the major problems man faces. As pupils study each of these, they turn to many different subjects for relevant learnings.

Suppose you were planning to teach a unit on weather to a fourth-grade class. In one column, make a list of all of the science learnings to be included in the unit which have relevance for health or safety. Consider such problems as dressing for the weather, or riding bikes in all kinds of weather. In a separate column list desirable pupil behaviors stemming from these learnings.

SELECTED READINGS

BEAUCHAMP, GEORGE A., *Planning the Elementary School Curriculum* (Allyn & Bacon, 1956). Chapter 2 describes the subject-centered curriculum, the experiences curriculum, and intermediary types of curriculum.

EDUCATIONAL POLICIES COMMISSION, *Education for All American Children* (National Education Association, 1948). Chapter 3 describes the scope and sequence used in various elementary schools.

JOHN DEWEY SOCIETY, Yearbook III, *Democracy and the Curriculum* (Appleton-Century-Crofts, 1939). Chapter XV analyzes the problem of developing the design of the curriculum.

KELNER, BERNARD C., *How to Teach in the Elementary School* (McGraw-Hill, 1958). Chapter 4, "How to Plan a Curriculum," gives practical suggestions for making a daily program.

KLAUSMEIER, HERBERT J., DRESDEN, KATHARINE, DAVIS, HELEN C., and WITTICH, WALTER A., *Teaching in the Elementary School* (Harper & Brothers, 1956). Chapter 4 describes various types of curriculum organization.

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OTTO, HENRY J., *Elementary School Organization and Administration* (Appleton-Century-Crofts, 1954). Pages 94–105 explain how the design of the curriculum facilitates teaching.

SAYLOR, J. GALEN, and ALEXANDER, WILLIAM M., *Curriculum Planning* (Rinehart & Co., 1954). Chapters 8, 9, and 10 deal with the question of "How Shall the Curriculum Framework be Organized?"

SMITH, B. OTHANEL, STANLEY, WILLIAM O., and SHORES, J. HARLAN, *Fundamentals of Curriculum Development* (World Book Co., 1950). Part Four deals with patterns of curriculum organization.

SPEARS, HAROLD, *The Emerging High School Curriculum* (American Book Co., 1948). Chapter 3 describes six types of curriculum organization.

STRATEMEYER, FLORENCE B., FORKNER, H. L., MCKIM, M. G., and PASSOW, A. HARRY, *Developing a Curriculum for Modern Living* (Teachers College, Columbia University, 1957). Chapter 4 reviews varied proposals for curriculum organization and suggests an organization based on persistent problems of living.

TABA, HILDA, "General Techniques of Curriculum Planning," in *Curriculum Reconstruction*, Forty-fourth Yearbook, Part I, National Society for the Study of Education (University of Chicago Press, 1945), Chapter V. An excellent discussion of the problem of organizing learning experiences.

SELECTED FILMS

Children Must Learn. A 13-minute sound film that suggests that school work should be directed toward ways of improving everday living. New York University Film Service.

Learning Democracy Through School-Community Projects. A 22-minute sound film depicting students in situations that require planning and cooperation with other students and adults. University of Michigan.

We Plan Together. A 21-minute sound film that shows pupils as they identify the objectives of their class work, prepare and present a lesson, and evaluate their work. Teachers College, Columbia University.

☐ CURRICULUM IMPROVEMENT involves many types of activity. The school staff examines research dealing with factors that influence learning, experiments with techniques for gaining a better understanding of children, analyzes recent social trends, and makes surveys of the local community. It formulates lists of educational objectives, evaluates instructional materials, prepares curriculum guides, and develops the overall design of the curriculum. These activities are, however, merely means to an end—the improvement of living and learning in the classroom. It is in the individual classroom that the actual improvement of the curriculum takes place.

The quality of living and learning that goes on in elementary-school classrooms is intimately connected with the strength and unity of this nation. Since dictators have demonstrated that the schools can be used as effective instruments for developing, in a half-century or less, a nation of individuals loyal to totalitarian ideals, it follows that faith in democracy and capacity for participating in cooperative group enterprises must be developed in our schools if the American way of life is to survive.

Traditional classroom procedures, embodied in what is generally known as the recitation method, are ill suited to the achievement of the objectives of democratic citizenship. If the elementary school is to fulfill

CHAPTER

6

Organizing the Class for Living and Learning

It is the teachers, and especially those who deal with the very young, who have made the character and conscience of America what it is today. It is they who will continue to implant ethics, decency, character, and a determination to do the very best. They have made America what it is and must continue to be.—BERNARD BARUCH

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its mission as the front line of American democracy, we must discover the methods of democracy and put them to work in classrooms.

The Foundations of Modern Teaching Methods

The procedures involved in what is commonly known as the recitation method have for several decades been recognized as inadequate to meet the demands upon the elementary school. Thayer pointed out in 1928 that these procedures were based upon a psychology of learning no longer accepted, out of harmony with the broader objectives of education, and inconsistent with our fundamental democratic aspirations.[1] Since that time much progress has been made in incorporating into instructional practices the implications of the newer psychology of learning, in broadening the objectives of elementary schools, and in placing more emphasis upon democratic living in the class-room. The following outline is based upon the assumption that these three factors, which have been given attention in preceding chapters, provide the fundamental sources to guide teachers in making decisions in regard to methods.

Principles of method based on the newer
psychology of learning

1. Method should utilize the present interests of pupils and stimulate the development of further interests.

2. Method should encourage the pupil to establish worth-while goals toward which to work.

3. Method should provide opportunities for developing the latent crea-tive abilities of pupils.

4. Method should make provision for individual differences in abilities, interests, and backgrounds of pupils.

5. Method should utilize opportunities for learning through the use of concrete materials.

6. Method should provide for the development of basic skills through use in meaningful situations.

7. Method should provide experiences closely geared to the maturity level of the child.

8. Method should reflect an understanding of the broader concept of learning as the modification of behavior.

[1] V. T. Thayer, *The Passing of the Recitation* (D. C. Heath & Co., 1928), p. III.

Principles of method based on the democratic ideal

1. Method should provide for teacher-pupil cooperation in planning, executing, and evaluating.

2. Method should provide for a proper balance between pupil freedom and teacher guidance.

3. Method should provide for pupil participation in the solution of problems arising in connection with school living.

4. Method should provide opportunities for the pupil to develop skill in group processes.

5. Method should provide for the stimulation of individual effort through the use of group approval.

6. Method should provide opportunities for pupils to make decisions and assume responsibilities.

7. Method should provide for the gradual development of self-direction on the part of pupils.

Principles of method based on the broader
objectives of elementary education

1. Method should be concerned with all aspects of child development.

2. Method should provide a well-balanced program of activities for pupils.

3. Method should provide for orienting the child to his community, his nation, and the world.

4. Method should promote security and satisfaction for every child.

5. Method should reflect an understanding that the fundamental skills are broader than the three R's.

6. Method should reflect an understanding that teaching the fundamental subjects such as reading, writing, and arithmetic involves the development of attitudes, appreciations, and understandings, as well as knowledge and skills.

The Improvement of Teaching

It is not difficult to recognize that better teaching methods are based upon a clearer understanding of the nature of human growth and development, of the realities and ideals of the culture, and of the broader objectives of the modern elementary school. How the teacher goes about the task of incorporating modern psychological, social, and philosophical principles into everyday practices, however, is more difficult to explain. Written language is

a weak instrument for communicating the characteristics of good teaching. Perhaps the most accurate impression can be gained by visiting a classroom where good teaching can be observed. The quest for better teaching procedures is made easier, too, by recent publications which provide examples of good teaching procedures.[2] In addition, a number of films and other audio-visual resources are available for helping to bridge the gap between abstract principles of teaching and "getting the feel" of what constitutes good classroom teaching. The film *Broader Concept of Method*, listed at the end of this chapter, illustrates this source of help.

The remainder of this chapter is devoted to an analysis of some of the factors involved in organizing the class for living and learning, including (1) improving group living in the classroom, (2) improving the classroom environment, (3) developing discipline for freedom, and (4) developing units of work.

Improving Group Living in the Classroom

The idea that the teacher has a responsibility for creating conditions for better group living in the classroom is one of the most challenging, exciting, and pervasive concepts in modern education. The quality of group living makes the difference between an excellent teaching-learning situation and a poor one when evaluated in the light of democratic values. The teacher who understands the meaning of group dynamics and who uses the techniques of group leadership intelligently has solved many of the problems relating to the broader concept of method. This does not imply that these techniques are new or that there is any particular virtue in the term "group dynamics" as such. Many teachers have been using group processes successfully for years without knowing that the term existed. Other teachers have wondered why they have so much difficulty with groups, why their pupils seem to learn slowly, and why they have so many discipline problems. Teachers have always known that a child's behavior is different when he is a member of a group, that a group is something more than just an aggregation of individuals, and that there are good groups and groups that are difficult to manage. The term "group dynamics" seems to be a convenient shorthand expression for those principles and procedures that provide greater insight into and greater skill in the solution of problems of group management. As teaching becomes more highly professional, it is to be expected that new and more

[2] See the following references: F. G. Macomber, *Guiding Child Development in the Elementary School* (American Book Co., 1954), pp. 4-19; Association for Supervision and Curriculum Development, *Toward Better Teaching* (National Education Association, 1949); Opal Waymire List, "We Teach This Way Now," *Journal of the National Education Association*, May 1945, p. 113.

technical terms will be applied to various aspects of the teacher's work. Teachers, therefore, are making a greater effort than ever before to understand the implications of such terms as "group dynamics" and to help parents and other interested citizens see more clearly what such terms mean in relation to the effort to provide better educational opportunities for children.

The meaning of group dynamics

Group dynamics refers to the study of what happens when human beings work in groups. It is concerned with discovering the extent to which human beings behave differently when they are members of a group from when they are alone; the factors that promote group productivity; and the techniques that are effective in group discussion, planning, and evaluating. It is concerned with helping individuals to understand what is happening in the group, to assume their responsibilities as group members, and to learn the techniques of group leadership.

Human relations has been the subject for research and experimentation in industry for several years. In an experiment conducted by the Western Electric Company several years ago is was found that the productivity of workers depended more upon social and psychological factors related to organization and management than upon external factors, such as physical working conditions. The experiment showed that changes relating to human relationships played an important part in determining how much work an employee did and how well satisfied he was in doing it.[3]

The study of the nature of groups, group processes, and group leadership is receiving increasing attention in books for school administrators and supervisors.[4] It is recognized that the faculty of a school must represent more than a mere aggregation of individuals if the objectives of the modern elementary school are to be realized; the faculty must be bound into a closely knit social organization with common purposes, intense loyalties, and effective ways of working together. The administrator or supervisor must know a great deal about human relationships, group processes, and leadership techniques if he expects to direct his staff toward the accomplishment of the goals of education. Some of the techniques used for this purpose are discussed in Chapter 7.

The study of group dynamics has also had a profound influence on the methods of teaching used in modern elementary schools. Teachers have

[3] See F. J. Roethlisberger and W. J. Dickson, *Management and the Worker* (Harvard University Press), 1939.
[4] See Wilbur A. Yauch, *Improving Human Relations in School Administration* (Harper & Brothers, 1949); and Kimball Wiles, *Supervision for Better Schools* (Prentice-Hall Inc., 1950).

learned to use sociometric tests to determine the structure of human relationships within a given group of children and the degree of acceptance or rejection of each child by the group. They are learning the techniques for studying the group behavior of boys and girls and for fostering group discussion, planning, and evaluation. A rapidly increasing number of guides are available to teachers who are interested in improving human relationships in the classroom.[5]

Coaction and interaction

The most striking contrast between the modern school and its predecessor can be seen in the changing relationship of teacher to children in the classroom. Olson has illustrated this by use of the terms "coaction" and "interaction."

> Coaction, useful for carrying on some routine relationships and for mass movements, is involved when the group as a whole acts in response to a command from a leader such as the teacher. Traditional schools tend to emphasize coaction. Fixed seating, with the children looking at the backs of those ahead of them, fosters coaction. Interaction in such a group is usually between the teacher and each pupil. By contrast, in the interactive groups members are commonly arranged in a face-to-face situation around a table, in a circle, or in a semi-circle. The leader in this case assumes certain responsibilities for group management, but the children are encouraged to participate, to discuss with one another, and to grow in their ability to conduct themselves as effective members of a social group with common purposes.[6]

Values to be derived from participation in group processes

Cooperative group work is essential to democratic living. A group of children around a conference table setting up goals, making plans, assuming responsibilities, or evaluating achievements represents an essential prelude to intelligent, responsible citizenship. Children learn from one another through sharing ideas; group action is more effective when several individuals have shared in the planning; individuals find a place in group projects for making contributions in line with special talents; and morale is higher when children work together cooperatively on group projects. This is not meant to imply that there is no place in the modern classroom for individual effort; there

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[5] See Helen Hall Jennings, *Sociometry in Group Relations* (American Council on Education, 1948); Department of Supervision and Curriculum Development, *Group Planning in Education* (National Education Association, 1945); and Ruth Cunningham, *Understanding Group Behavior of Boys and Girls* (Teachers College, Columbia University, 1951).

[6] Willard C. Olson, *Child Development* (D. C. Heath & Co., 1949), p. 194.

should be a time for both individual and group activity. However, effective group work is the phase that is usually neglected because the techniques for directing this phase of the program are more difficult to master than the techniques for working with individual pupils.

We need to be careful, however, to choose activities for group work that are best accomplished by use of the group. An occasional teacher, fired with enthusiasm for the values achieved as children work together, will try to accomplish by use of the group an activity that might better be done by individuals. In one sixth-grade class, for example, a group of five pupils prepared a picture map of France showing its products. One pupil did the research, another did the outline of the map, two painted it, and the fifth drew the picture symbols. It was true that the children shared in the planning and cooperated in getting a job done, but it is doubtful whether anyone except the boy who did the research learned very much about France. Activities should not be selected solely on the basis of the opportunity for learning to work in groups; this learning should be a by-product that is attained as children work toward some other educational goal.

The teacher needs to know how to organize

When the primary purpose of the elementary school is regarded as the mastery of the knowledge and skills relating to the three R's, and when the aristocratic philosophy of selection and elimination prevails, classroom organization is a relatively simple matter. Knowledge and skills considered important by experts in the various fields are selected and divided into quotas, with a certain quota assigned to each grade. The classroom teacher has only to organize the materials assigned to his grade in an orderly sequence and proceed to cover a certain amount of the content each week.

On the other hand, when learning is regarded as the modification of behavior, and when the democratic philosophy of educating each child to the full extent prevails, organizing the class for living and learning becomes one of the most difficult and at the same time one of the most crucial tasks confronting the teacher.

The effective teacher in the elementary school must, therefore, be somewhat of an expert in human relations, must be a good administrator, must know how to keep several groups working harmoniously and profitably, must have an intimate knowledge of each pupil's needs and abilities, must have a wide acquaintance with various types of resources for learning, and must have the ability to capitalize pupil's capacity for leadership and to enlist their wholehearted cooperation.

A recent yearbook of the Association for Supervision and Curriculum Development lists the following basic concepts of cooperative learning:

1. Cooperative learning begins with establishing rapport.
2. Cooperative learning gives pupils experience in setting up goals together.
3. Cooperative learning provides an opportunity for pupils to plan and develop experiences to achieve their objectives.
4. Cooperative learning encourages all concerned to make group decisions and assume responsibility for those decisions.
5. Cooperative learning provides for a division of responsibility among individuals and small groups.
6. Cooperative learning gives pupils an opportunity to gather and distribute materials.
7. Cooperative learning extends beyond the classroom.
8. Cooperative learning provides for group evaluation of progress toward goals.[7]

The yearbook referred to above provides a large number of illustrations of cooperative learning sent in by classroom teachers from various sections of the country.

Time and effort spent in establishing rapport during the first few days pay large dividends later. One purpose of this effort is to establish a friendly relationship in which each child regards the teacher as a helpful and trusted member of the group who is really interested in him as a person. Another purpose is to provide opportunities for pupils to know one another and to build a framework of mutual understanding and trust, without which effective group work is impossible. Good teachers go about the job of establishing rapport in many ways. Studying individual records before meeting the group for the first time, talking with individual pupils or small groups informally as time permits, observing children on the way to school or on the playground, recognizing individual interest and talents, encouraging children to talk freely about out-of-school interests and experiences, choosing wisely the words she uses, and being able to call each pupil's name without hesitation are some of the ways in which the teacher can help to create an environment for cooperative learning in the classroom.

Children need help from the teacher in setting up group goals. Although the goals will have more meaning if children express them in their own words, it is necessary for the teacher to help them decide what they are going to do and how they are to begin. The group will need assistance in finding ways to integrate individual aims with those of the group. Usually a way can be found to help the individual realize his personal goals while he is contributing to the realization of the goals of the group.

Once individual and group goals are clear to members of the group, the teacher must help the group organize in ways to attain these goals. The class is usually divided into several committees for working on various aspects of the problem selected. Some teachers find it difficult to give the various com-

[7] Association for Supervision and Curriculum Development, *Toward Better Teaching* (National Education Association, 1949).

mittees enough freedom to work out their problems in their own way; others fail to give them enough guidance, and the result is chaos. The teacher should be sure that necessary materials are available and that the children know where and how to obtain them. Certain members of the group may take responsibility for distribution of materials and for keeping a record of materials used. In any case it is well to remember that children learn to plan only through planning and that experiences in cooperative planning can yield valuable learnings.

One important factor in the success of a group is leadership. The members of the group need help in choosing the group leader wisely. The leader needs help in understanding the functions of the leader. The film Broader Concept of Method, listed at the end of this chapter, illustrates how the teacher can help a pupil understand what a leader is expected to do.

Improving the Classroom Environment

The education of the child is, in the broader sense, a function of the total environment. Attention was given, in Chapter 3, to several educative agencies other than the school which help to shape the lives of children. The school curriculum, although it utilizes the contributions of out-of-school agencies to enrich and make more meaningful the school living of boys and girls, is not as broad as life itself. Rather, it represents those experiences of children for which the school accepts responsibility—it is an enterprise in guided living. In the same sense, no classroom can be completely isolated from the influence of the school system, the home, the community, and the realities and ideals of the society in which the school exists. For the purpose of this discussion, however, the term "classroom environment" is used to mean those physical, intellectual, emotional, and social factors that directly affect living and learning in the classroom. The classroom environment plays an important role in determining the quality of living and learning that is provided for children. The teacher has many opportunities to create with and for children a classroom environment that promotes cooperative group experiences through which children develop skills for living in a democratic society.

The physical environment

The physical environment of the classroom includes the location, size, shape, and construction of the room itself; the furniture in the room; the

instructional supplies or resources for learning; the provisions for lighting, heating and ventilating; the acoustics of the room, and the provisions for sanitation, cleanliness, and orderliness. Every teacher knows that the physical environment of the classroom in which she must work has certain advantages and disadvantages.

The teacher has the responsibility of examining carefully the assets and liabilities of the classroom and of planning to make the best use possible of the equipment she has. The staff of the elementary school must not assume that the physical environment of classrooms is the responsibility of the board of education, the superintendent, and the school architect. In this period of increasing enrollments in elementary schools, more new buildings are being constructed than ever before. Fortunately, the profession of school architecture is coming of age. The modern school architect realizes that he is not just planning a building; rather, he is planning a building for children. He does not begin by pulling from his files the plans for an elementary-school building somewhere else and expecting the curriculum to fit into the type of building available. He begins by consulting teachers, children, and parents to find out what the objectives of the school are, what activities will go on in the school as a whole and in each of the various rooms. The building is planned to fit the needs and activities of the children.

It is not the purpose here to give a detailed description of the modern elementary-school building or classroom; such information is available elsewhere.[8] The following statement gives a general idea of the requirements:

> Most school plants, old or new, are entirely inadequate to meet the demands of an educational program that recognizes child behavior and growth. Many school buildings are characterized by drabness, dreariness, staleness, crooked maps, and dusty pictures of George Washington. One does not feel that pulsing life has any part in them. The school building must be designed for creative living. One of the first steps is to rid the school of its traditional rows and rows of desks or their counterpart. Space is essential for movement. It releases the spirit and provides a setting for creativeness. It is not necessary that every child have writing space at the same time. Rugs, rocking chairs, hassocks, window seats, and other pieces of incidental furniture give a homelike atmosphere to a room. Low bookshelves, growing plants, gay curtains, aquariums, terrariums, costume boxes, colorful pictures painted by the children, and the varied assortment of things that have meaning to a group all make a classroom a place where children can better live and grow. There is no space for the traditional teacher's desk nor would there be any time for her to sit behind it if there were one.[9]

[8] American Association of School Administrators, *America's School Buildings* (National Education Association, 1949).

[9] Association for Supervision and Curriculum Development, *Organizing the Elementary School for Living and Learning* (National Education Association, 1947), pp. 28–39.

The intellectual, social, and emotional climate

Everyone is familiar with the discomforts of the extremes of physical climate. But the climate outside is not as important to teachers and children as the climate inside the classroom. The climate of the classroom is more important than colored walls and chalkboards, than beautifully polished tables and chairs; more important even than an abundance of the latest instructional materials.

Most of us are familiar with different classroom climates, for we have visited rooms so lacking in friendliness that we call them cold or chilly. We have seen stormy rooms too, where the air was electric and we felt that a storm was about to break; and foggy rooms, where the teacher and the children were anxious, jittery, and uncertain. You feel, after a visit to such rooms, that you have been in a foggy, misty, damp atmosphere and you are glad to get out into the fresh air again. Then there are rooms where you feel that you have just walked into a patch of warm spring sunshine, where the children are happy, good-humored, and secure as they work. These are the rooms in which the children find a sunny warmth of being appreciated for their own special abilities and skills; where the teacher is serene, patient, and happy. These rooms have a temperate climate which is right for the optimum growth of the child—a climate in which the learning process flourishes.

What can teachers do to foster an intellectual, social, and emotional climate in the classroom which will help pupils develop skills for living? What are the skills for happy, successful living with others? Although the intellectual, social, and emotional phases of child development are inseparable, it may be more convenient to consider them one at a time. The ability to think clearly, critically, and creatively is highly important for living. Thinking is not something children do only in school as they prepare arithmetic assignments or write examinations. Rather, it is something they have to do in order to meet the problems of living that they face both in school and in the life outside the school. It assumes increasing importance as children grow to adulthood and face the complicated problems of living.

What can teachers do to help children think clearly, critically, and creatively? First, teachers must understand that problem-solving develops through several stages. Most of the problems that children face are in reality a collection of smaller problems, and teachers need to help children see that they really have not one problem to solve but several. The next step after recognizing the problem and breaking it down into smaller problems is to collect all of the facts that bear on the problem. Children need help in picking out the relevant facts and discarding the others; in forming tentative conclusions on the basis of the facts collected; in postponing a conclusion until sufficient facts have been collected; and in trying out the tentative solu-

tion to see whether it works. All of this means that the teacher is creating an intellectual environment in which children are free to work out under intelligent guidance the solutions to their own problems and thus grow in the ability to be intelligent, self-directing citizens. It represents the application to the classroom of the democratic principle of experimentation.

The social climate of the classroom is as important as the intellectual climate. Developing a desirable social environment in the classroom has been given increasing attention in recent years as teachers have gained a better understanding of the nature of the *social heritage*, the relation of the individual to the group, and the part the environment plays in forming the human personality.

Sociologists use the term *social heritage* to signify the knowledge, habits, techniques, mores, and institutions that are transmitted from one generation to another by means of social participation and formal education.[10] The home, the community, the church, and other educational agencies help the growing child to identify himself with the society of which he is a part, but the school is society's specialized agency both for promoting the social growth of children and for perpetuating and improving the culture. Thus the classroom becomes a laboratory in which the child studies, discovers, and enjoys the democratic way of life.

The importance of the classroom's social climate is understood more clearly when it is considered in the light of the relation of the individual to the group. Society is the necessary environment for the development of human personality; the individual is as intimately related to the environment as the seed is to the earth in which it grows. An infant abandoned by society and by some miracle enabled to survive would never develop the traits we consider human; it is only in society that we become human in any intelligible sense of the word. Thus the human infant is born with a social inheritance which, through the work of the school and other educational agencies, develops his mental equipment and personality. At the same time, the social heritage is reinforced and improved by the continuous social experience of the individual. Society does not repress individuality; it provides the social relationships in which individuality develops. Men are not "born free"; it is only through human relationships that men can attain freedom.

Children are social beings and grow best in a social climate that gives each a chance to contribute to his environment according to his ability. Growth in reading, writing, and arithmetic is no more important than social growth. In fact, these skills are, properly, the useful tools for better social living. The writing of letters, the recording of events, and the keeping of accounts are integral parts of daily living in the school which create a real

[10] See R. M. MacIver, *Society: Its Structure and Changes* (Ray Long & Richard R. Smith, Inc., 1933), Chapters 2 and 18.

need for writing, spelling, and using number skills. Growth in any skill becomes more functional when it takes its rightful place as a social rather than a mechanical development.

The school is better equipped than other educational agencies to provide an environment that fosters the social growth of children. The home contains too few children, is frequently located on busy streets or highways, and in many instances is planned and furnished for adults rather than for children. The school, on the other hand, is a place built specifically for children, with adult leadership which fosters the development of characteristics required for effective participation in group life.

In general there are three types of social climates existing in elementary-school classrooms: autocratic, laissez-faire, and democratic. In the autocratic climate, the teacher makes all the important decisions, directs all the activities, and evaluates pupil progress in terms of arbitrary standards. Children find little opportunity in this type of climate for initiative, participation in group planning, or self-evaluation.

In the laissez-faire climate, each child operates as an individual, strives for recognition of his own achievements, and develops little regard for the rights and accomplishments of others. In this climate the human relationships are in terms of coaction rather than interaction; there is little emphasis on group living.

In the democratic climate, goals are established and plans are made on the basis of cooperative group planning. The role of the teacher is neither that of a dictator nor of an interested spectator. The teacher assumes the role of a mature person responsible for guiding the work of the children as they work out goals, plan activities, and evaluate achievements. Leadership is not regarded as the exclusive privilege of the teacher or of a few gifted children. It is a shared role; sometimes one and sometimes another acts as leader according to what the individual can contribute to the work of the group as a whole.

Chapter 9 contains suggestions relating to social living in the classroom.[11]

Emotional control is another important skill for living. The child who has good mental health can meet disappointments bravely, can remain good-natured under trying circumstances, can admit mistakes, and can forget offenses quickly. Good general health makes it easier for a child to develop emotional control. The child who is well nourished, who gets sufficient sleep, and whose general physical condition is good fares better in respect to

11 Teachers in many elementary schools are working with children to improve the social climate of the classroom. Specific illustrations are contained in so many recent publications that it would be useless duplication to reproduce them here. See Association for Supervision and Curriculum Development, 1945 Yearbook, *Group Planning in Education;* 1947 Yearbook, *Organizing the Elementary School for Living and Learning;* and 1949 Yearbook, *Toward Better Teaching.*

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emotional adjustment than the one who lacks these things. The school cannot provide the food and other essentials of good general health, but it is responsible for teaching the child the importance of health and for working closely with parents to see that the health needs of the child are given adequate attention.

The classroom climate has a great deal to do with the mental health of children. The teacher can do a great deal to see that the personality needs of the child are being met in the classroom. The child needs to feel secure in his group; the insecure child is a problem child. Children must have opportunities to make decisions and to become increasingly self-directing and the teacher can provide these opportunities. The school must also provide opportunities for wholesome play, for play will reduce emotional tensions when all else fails.

Even if children are in good health, feel secure at home and at school, and engage in wholesome play activities, they must still be taught to control their emotions. To get over emotional outbursts children have to learn that temper tantrums, crying, and feeling sorry for themselves will not work. If they have not learned this lesson before they come to school, they will have to find out by experience that having a pleasant disposition and trying to solve their problems in a reasonable way are most effective in relations with teachers and other children at school. Emotional control, like arithmetic, cannot be learned in a week. Teachers must work continuously at the job if children are to develop this important skill for living.

Developing Discipline for Freedom

The close relationship existing between the work of the public schools and the future of our democratic way of life places a heavy responsibility on the teachers of America. Teachers in our society must not only do a thorough job of teaching the fundamental subjects but must do so in such a manner as to produce the kind of citizens needed in a free society. To fulfill this obligation it is necessary that teachers understand not only that discipline is necessary in any type of society but that the discipline required in a democracy differs from that required in a totalitarian regime. The discipline of a totalitarian regime is meant for slaves; the discipline of a democracy is meant for free men. The discipline that sustains the dictatorship would destroy a democracy. The danger that exists in America during these critical times, the danger of resorting to a type of discipline suited to a totalitarian regime, has been recognized by many intelligent and patriotic citizens. Democracy, no less than dictatorship, requires discipline. Without a disciplined citizenship, knowledge and material strength are to no avail. Indeed, the champions of

despotism in all ages have been confident that the lack of discipline would prove the fatal weakness of democracies; to them freedom and discipline have been contradictory terms. It is imperative, therefore, that the special kind of discipline that is suited to free men be clearly understood not only by teachers but by members of the general public as well.

The term "discipline" has many meanings. We speak of mathematics, psychology, or history as a discipline, meaning a field of study or a school subject. We also think of discipline as the quality of the individual that causes him to restrain the impulses of the moment, to sacrifice immediate pleasures for the attainment of a purpose. Most adults realize that discipline, taking the harder way when an easier one is open, is a prerequisite to worthwhile achievement. When we say that a teacher has good discipline, we mean that she maintains order in the classroom. When we say we had to discipline a child, we usually mean that we had to punish him. Finally, when we speak of developing discipline for freedom, we mean providing experiences that will foster self-direction or self-control in the child. Democracy cannot survive without individuals who can sacrifice immediate interests to remote ends, who can sacrifice personal interests to the welfare of the group, who can exercise self-control to such an extent that social control becomes increasingly unnecessary.

Children cannot develop the discipline for freedom by being held under the complete domination of the teacher day after day and month after month; neither can it be achieved by "taking the lid off" and allowing children to do as they please. It can be achieved only by living in the classroom from day to day in accordance with the ways of democracy under the guidance of a teacher who understands how human behavior develops and who, in his daily activities both in the school and in the community, practices the discipline of a free man.

Organizing the classroom environment deliberately to give children experience in democratic living and removing from the classroom those practices that stand as obstacles to the achievement of discipline for freedom are highly complex and difficult tasks. They are achieved by (1) gradually reducing the amount of teacher direction as children become more mature, (2) giving children many opportunities for planning, sharing, discussing, and evaluating activities, (3) encouraging children to assume an increasing amount of responsibility for the control of behavior in the room, (4) encouraging experimentation and problem-solving, (5) fostering skill in self-analysis, (6) developing children's ability to make intelligent choices, and (7) providing enough teacher direction to give the children security and satisfaction.[12]

[12] For detailed suggestions for helping pupils develop self-direction see Association for Supervision and Curriculum Development, *Toward Better Teaching* (National Education Association, 1949), pp. 86–118.

For the teacher in the modern elementary school, an understanding of the relationship between freedom and discipline is the beginning of wisdom; and the ability to foster self-direction determines her professional stature.

Developing Units of Work

An examination of curriculum guides and of recent books dealing with curriculum and instruction reveals that the unit of work is widely used as a method of organizing the work of the class in elementary schools. Although there are differences of opinion concerning the meaning of the term, its essential characteristics, and the methods that should be used in selecting and developing units, the idea seems to be generally accepted that the unit of work represents one of the best devices yet developed for achieving the broader objectives of the modern elementary school.

Meaning of a unit of work

The Dictionary of Education defines a unit as "an organization of learning activities, experiences, and types of learning, around a central theme, problem, or purpose, developed cooperatively by a group of pupils under teacher leadership." [11] The essential features implied by this definition are that (1) learning takes place through many types of experiences rather than through a single activity such as reading and reciting; (2) the activities are unified around a central theme, problem, or purpose; (3) the unit provides opportunities for the socialization of pupils by means of cooperative group planning; and (4) the role of the teacher is that of a leader rather than that of a taskmaster.

Types of units

References can be found in educational publications to resource units, curriculum records, teaching units, learning units, subject-matter units, experience units, commercial units, activity units, core units, functional subject-matter units, and survey units. In general, however, two principal types of units are recognized: subject-matter units and experience units. It is obvious that any unit uses both experience and subject matter. The difference is primarily one of emphasis: in one type, experience receives the primary emphasis, whereas in the other, subject matter is given more emphasis. A

[11] Carter V. Good, *Dictionary of Education* (McGraw-Hill, 1945), p. 436.

learning experience in which the central concern in the acquisition of information, in which the experiences involved are few and formal, is referred to as a subject-matter unit. A learning experience in which the central concern is with the development of desirable traits of behavior, *in which numerous and varied learning experiences are involved, in which subject matter functions as a means to an end, is referred to as an experience unit.*

Although *it is useful to understand the meaning of such terms as subject-matter units and experience units, it should be realized that in actual practice the terminology used is not the most important consideration.* The teacher in actual classroom situations is concerned with providing rich and varied experiences for children, with providing opportunities for pupils to participate in planning, executing, and evaluating experiences, and with selecting and organizing experiences in relation to worth-while purposes that are significant to children.

Problems involved in developing units

Outlines of the principal steps, stages, or problems involved in developing units of work are available from many sources.[14] *These outlines should not be followed rigidly in any school; instead, each school should develop an outline of its own which expresses clearly what the teachers are trying to accomplish in that particular school.* Certainly, the various steps in unit development should not be considered as separate and distinct. Evaluation, for example, is not something that is undertaken after the other steps have been completed; it is something that goes on continuously throughout the time spent on the unit. The following discussion is intended merely to emphasize the problems teachers must be prepared to meet as they work with children in planning and developing units of work.

ORIENTATION OR APPROACH. Even in traditional schools where teaching has been organized on the basis of the recitation, good teachers have never been satisfied merely to assign lessons without first arousing the interest of pupils and otherwise preparing them for understanding the significance of the lesson. The success of the unit of work depends in large measure upon the ability of the teacher to (1) create an interest in the unit, (2) help the pupils to see the significance of the unit, (3) relate the unit to past experiences of the pupils, (4) utilize the resources of the local community in orienting the children to the problem, and (5) provide a classroom environment that stimulates interest in the unit.

[14] See I. James Quillen, *Using a Resource Unit* (National Education Association, 1942); Ruth G. Strickland, *How to Build a Unit of Work*, Bulletin No. 5 (Federal Security Agency, United States Office of Education, 1946); and Lavonne Hanna, *et al*, *Unit Teaching in the Elementary School* (Rinehart & Co., 1955).

During the orientation period the teacher must be alert to discover the interests, needs, and capacities of individuals; to look for leads to worth-while activities for individuals and groups; and to develop a feeling of group unity and enthusiasm. Observation of a master teacher during the orientation period of a unit of work leads to the impression that a great deal of time is being wasted in getting the unit under way, unless the observer understands the crucial importance of enlisting the enthusiastic participation of every pupil in the enterprise.

Through skillful planning of class discussions during the orientation period, it is possible for the teacher to help pupils see themselves in relationship to the new unit so that a high degree of involvement occurs from the outset. Such was the case in one study of community health problems in which the teacher began with a discussion of health problems students themselves had faced. It was discovered that more than half of the class had had malaria. The students wondered whether they were representative of the total population of the city. They found that local health authorities had no reliable data, and so the students proposed to find answers to their questions by a direct survey. Interest was high by this time, and the work was planned carefully and executed well. The time had been well spent in orienting the pupils to the undertaking.

The sources available from which the approach to the unit may be developed differ from one situation to another. Some common sources are: (1) discussions in the classroom or elsewhere, (2) materials brought from the homes of pupils, (3) exhibits and displays, (4) an important event reported in the papers, (5) the presence of an outstanding visitor, (6) a motion picture being shown locally, (7) a vacation trip taken by the teacher or a pupil, (8) an excursion, (9) a book, magazine, or poem, (10) an educational film, (11) an experience from a previous unit.

TEACHER-PUPIL PLANNING. The pupils, under the guidance of the teacher, should have a large share in planning the activities to be included in the unit. Plans must be made concerning (1) the objectives of the unit, (2) what activities are necessary, (3) what committees will be needed, (4) what responsibilities each committee will have, (5) what activities each pupil should undertake, and (6) how the unit is to be evaluated. It is through participation in planning that pupils are given opportunities for democratic living in the classroom. As the children suggest objectives, activities, or procedures, the teacher writes them on the blackboard. It is the teacher's responsibility to suggest others that the children may overlook. After the suggestions have been listed, the children and the teacher evaluate them to discover relationships, eliminate duplications, and organize problems in a sequential order.

THE WORKING PERIOD. The activities that constitute the working period of a modern unit are lifelike, adjusted to the maturity levels of pupils, varied,

and socially significant. During the working period the children, under the guidance of the teacher, put into effect the plans previously made. The activities during this period will vary from day to day. There will be periods for working individually at gathering information, reading, or writing for materials and periods when the children work in groups, planning reports or excursions or working on exhibits.

The question is frequently raised by teachers who have not had experience with directing the varied activities involved in a modern unit of work: How can the teacher maintain order with so many different activities going on at the same time? A certain amount of noise is to be expected if a group of children is enthusiastically engaged in various enterprises. This does not imply that rudeness and near-bedlam are to be condoned. Many classrooms can be found in which children work on meaningful activities without an undue amount of noise or confusion. It must be admitted, too, that a teacher with an organized and organizing mind, with knowledge of the psychology of learning, with knowledge of the principles of leadership, possessed of some executive ability is necessary to the orderly management of the working period.

THE CULMINATING ACTIVITY. The culminating activity may take the form of a play, an exhibit of work, an assembly program, or a party. It is important that this activity be carefully planned so that the children will have a feeling of accomplishment and a greater sense of solidarity. Details of the culminating activity are usually planned during the progress of the unit so that this activity serves as a summary of the important achievements of the unit.

EVALUATION ACTIVITIES. Evaluation is an important phase of unit development. It is used for determining the extent to which the objectives of the unit are being realized, for helping each child determine his own progress, and for conferences with parents. The following principles of evaluation apply to unit teaching as well as to other phases of the instructional program.

1. *Evaluation should be comprehensive.* Evidence should be collected concerning all phases of child development and not merely his mental development or his mastery of specific knowledge and skills. Evaluation cannot be accomplished, of course, through the use of paper-and-pencil tests alone. These must be supplemented by teacher observation, anecdotal records, samples of the work of the pupil, case studies, sociometric tests, and teachers' ratings for responsibility, initiative, cooperation, work habits, and other habits and attitudes.

2. *Evaluation must be continuous.* In a unit of work, evaluation cannot be accomplished at a specific time. It is a continuous process that goes on during the orientation period, the planning period, the working period, and the culminating activity.

3. *Evaluation must be cooperative.* Opportunities must be provided for

Keeping Children Busy—and Profitably So

Modern education emphasizes the individualizing of instruction. Recognizing that pupils differ in their capacity and rate of learning, today's teacher has broken away from teaching the whole class the same thing at the same time and instead divides her class into smaller groups so that she can vary her instruction. But as she works with one of these smaller units, what is she to do with the rest of the class? It is easy enough to keep children busy, but not so easy to keep them busy at tasks that have educational value. Formerly teachers solved the problem with "seat work." Children filled in hectographed outlines, wrote their spelling words ten times each, or practiced pushes and pulls in Palmer-method penmanship while their teacher held a reading class in the front of the room. Such activities had little, if any, educational value.

In this first-grade classroom the teacher is working with a reading group in the front of the room. Note the variety of activities that engage the attention of pupils at their seats. Some pupils are working in the science corner; some pupils are reading for further information before reporting; others, who have finished their work, are painting. Can you suggest other activities that might be carried on with little or no supervision and that would have educational value? Are there some activities that are not suitable for reading periods for other reasons?

In order to have such periods proceed smoothly, the teacher must plan very carefully with pupils. Together they can think through the jobs that need to be completed for the day and these can be written on the board for future reference. It is important that each pupil know exactly what there is to do and how he is to do it. It is important, too, for teacher and pupils to work out a few simple rules of behavior for which pupils will be responsible. Are there other kinds of planning that need to be done before children can work with a minimum of supervision?

© (Photo: Suitland Elementary School, Maryland; McPherson, from Monkmeyer Press Photo Service)

Experimenting with Classroom Organization

Some of the readers of this book may recall that in their own school days there was no problem of classroom organization: the thirty-five or more pupils in a graded classroom were taught as one group. In reading, for example, all pupils opened the same text to the same page at the same time; the first pupil in the first row read a few sentences and each pupil in turn

read until the period was ended. Good readers breezed through their sentences and waited in an agony of boredom while poor readers stumbled through theirs, often needing help with every word. The system had little to recommend it. Fast learners were held back and slow learners learned little, except to despise the subject and to regard themselves as incapable of learning it.

But with the growth of the standardized testing movement in the twenties and thirties, teachers became more conscious of the spread of individual differences within a class. Research studies revealed that a typical third grade might have readers, for example, at second- to fifth-grade level; and that the spread might be even greater in the upper grades. Nor has sectioning large grades according to ability been found to be an answer. Sectioning does not eliminate individual differences and often works an injustice on pupils both just below and just above the cut-off point for the slow or accelerated section.

Dividing a class into three or more groups for instruction, particularly in reading and arithmetic, is now rather commonly done. This system of organizing a class allows for considerable flexibility in meeting individual differences. Its chief drawback is the great amount of time pupils must spend in unsupervised seatwork, while the teacher is working with another group. These unsupervised assignments are, of course, corrected later, but too often they give pupils a chance to practice wrong answers and in so doing to learn incorrect responses.

Some teachers are experimenting with having pupils work in pairs or in threes. In primary reading, for example, each pupil in the class might be paired with another pupil of equal ability. They take turns reading to one another, helping each other with difficult words. The teacher calls each pair to the front of the room to read with her, at least once every other reading period. In a class of thirty pupils, there may be fifteen reading at one time, but since the teacher is giving individual, not group, instruction, a hush-hush quiet need not prevail.

In arithmetic, each pair of pupils works at its own speed. Answers to problems are provided by the teacher, and pupils help one another to correct errors. However, the teacher tests all pupils once a week to make sure that they are really learning and are not depending too much upon answers provided for them.

In science and social studies, pupils may work in groups of three or more. Here two boys and a girl who can work together without wasting time are busy on a social studies assignment. They share books and other resources and help one another in locating information.

There is no recipe that can be followed in organizing a classroom to meet individual differences. Some teachers may have worked out a grouping system to their liking. But others may want to experiment with a plan whereby pupils are permitted greater freedom, in fact encouraged to help one another. The chief difficulty reported by teachers who have used such a system of organization as described above is that some pupils learn so fast that it is hard to provide them with enough challenging material!

© (Photo: Henry G Bookstaber, Art Supervisor; courtesy Ridgewood Public Schools)

each child to check his own progress and to participate in the group evaluation of the work of the unit. Qualities of initiative, self-direction, and responsibility cannot be developed if the pupil must always look to the teacher for the evaluation of his progress.

Advantages of unit teaching

The unit of work is not an educational panacea. Although the unit of work may form a large part of the curriculum in the elementary school, it does not constitute the whole curriculum. Children will read many books not specifically related to any unit; there is music that is valuable for its own sake as well as music related to a unit of work; and some aspects of skill will need practice for mastery which does not come from the unit of work. However, a number of values can be derived from units of work if the unit is carefully planned, if the teacher has a considerable amount of skill in managing group work, and if the class schedule is so arranged that a considerable block of time can be allotted to work on a unit. Some of these values are as follows:

1. A unit can provide admirably for individual differences because of the wide variety of activities involved; each child can find an activity in which he can participate successfully and from which he can gain recognition.

2. The unit can be adapted readily to the characteristics, needs, and resources of the community.

3. Materials can be drawn from many subject-matter fields.

4. The unit lends itself to the use of many concrete materials.

5. The unit provides opportunities for the development of initiative, self-direction, and responsibility.

6. The unit provides opportunities for the acquisition of useful information and skills through their use in meaningful situations.

Summary

1. Curriculum improvement, in the final analysis, means the improvement of teaching; it is in the individual classroom that the actual improvement of the curriculum takes place.

2. Traditional classroom procedures are ill suited to the achievement of the objectives of democratic citizenship; if the elementary school is to contribute significantly to the achievement of these objectives, we must discover and apply the methods of democracy.

3. Guiding principles for the improvement of teaching are found in the

newer psychology of learning, the democratic ideal, and the broader objectives of elementary education.

4. The teacher who understands the meaning of group dynamics and who uses this technique intelligently has solved many of the problems involved in organizing the class for living and learning.

5. The classroom environment, including the physical, intellectual, emotional, and social aspects, plays an important role in determining the quality of living and learning provided for children.

6. It is imperative that the special kind of discipline that is suited to free men be clearly understood by members of the teaching profession as well as by other citizens of a democracy.

7. The unit of work represents one of the best devices yet developed for achieving the broader objectives of the modern elementary school.

8. The terminology used in describing the program of unit teaching is not the most important consideration for elementary-school teachers; the important concern is that rich and varied experiences be provided; that emphasis be placed on pupil participation in planning, executing, and evaluating the work; and that experiences be selected in relation to worth-while purposes that are significant to children.

SOME PROBLEMS AND PROJECTS

1. Sam's trouble began in the primary grades. He never developed much facility in reading and found the fourth-grade social-studies reading very difficult. "Teaching the unit system helps children like Sam," says his teacher. "He's very good at construction work, making maps, murals and activities of that kind. He makes his contribution that way."

Is the teacher's solution a desirable one for Sam? Should some children be tagged as the ones who work almost entirely with their hands? Does the school have a responsibility for helping Sam develop facility in reading social-studies materials? Suggest ways in which the teacher might start.

2. Miss Gleason, who believes in developing discipline for freedom, begins her teaching with sixth-grade pupils who have been subjected to formal discipline all during their school life. She tells the class the first day that she does not believe in the teacher being a dictator, that she knows they

are old enough to be on their own in passing through the halls, and that there is no need for them to line up and go through the halls as a group.

When the noon bell rings for dismissal, Miss Gleason is almost knocked down in the stampede for the door. A few minutes later an irate principal enters to complain about the way in which the sixth-graders have raced through the halls.

Here are some possible lines of action:

Miss Gleason can tell her class that self-discipline does not work with them and that henceforth she will give out the orders, which they are to obey —or else.

Miss Gleason can recognize that she "took the lid off" too quickly and evaluate the dismissal with the class, working out a few simple rules to be observed.

Miss Gleason can tell her class that they are not quite ready for self-discipline and must go back to formal dismissals but that when she sees indications of their readiness, she will give them more freedom.

Evaluate each of these possibilities in terms of its probable effects upon pupil behavior.

3. One criticism of some orientation periods in unit teaching is that the teacher may rely on the unusual, the dramatic, the "gimmick"-like device to stimulate children's interest, instead of thinking through the kinds of questions she might ask in a discussion which would encourage the children to state problems, set up hypotheses, and test their hypotheses through reading and other activities.

Can you suggest questions that might stimulate thinking in the orientation period toward units such as these:

> The Gold Rush—sixth grade
> Westward Expansion—sixth grade
> Problems of Community Health—fifth grade
> Magnetism and Electricity—fourth grade
> Home and Family Life—first grade

4. Foreign visitors to our schools frequently comment on the friendly, mutually helpful, and industrious atmosphere of elementary classrooms. To a certain extent, this constructive psychological climate stems from an emphasis in American education upon the importance of cooperative endeavors for their potential contribution to democracy. We believe that when pupils take trips together, plan a parents' program, construct a piece of equipment, or design and carry out an experiment cooperatively, they are learning certain attitudes and behaviors toward one another that are essential to citizens in a democracy.

But pupils can learn to live together cooperatively by working on projects that contribute to their cognitive or creative as well as their social development. A learning activity should not be justified chiefly on the basis of its contribution to social development. At the present time there are some activities in vogue in elementary schools, consuming considerable pupil time while adding little to their knowledge, that are justified on the grounds that the children are learning skills for democratic living.

In the light of this criterion, write your criticism of or justification for each of the following activities. Where you feel that the activity might be justified if it were described more fully, add the specifics that you think are necessary.

    a. Second-grade children decided to set up a play grocery store in the classroom. A committee was appointed by the room chairman to measure and find a space for the store. Then, after a planning session, a building committee was set up to construct the store, an art committee to decorate the store, and a health committee to see that the store was stocked with foods essential to health. Apple boxes were brought in for shelves and corrugated cardboard for the walls, to be decorated by the art committee. The janitor helped with some of the harder construction problems and the finished store was an impressive-looking building. Every child in the classroom participated in the activity and all worked enthusiastically and persistently.

    b. Fifth-grade pupils, working in committees, constructed a model of a satellite out of papier-mâché.

    c. A group of sixth-grade children made a relief map of South America, modeling it on a large sheet of plywood out of wood putty. They included, among other features, the two largest lakes, the Andes, plateaus among the Andean peaks, the Guanian and Brazilian Highlands, important passes in the Andes, the coastal plain, the important rivers, and some of their tributaries.

5. Mrs. Hall's fourth grade was deep in a study of weather when an event of great local interest occurred. A lioness at the zoo gave birth to two cubs and then refused to suckle them. The children were very much excited about this news item and said to the teacher, "Let's study about lions. We want to know more about them."

How does Mrs. Hall handle such a situation? Does she drop the study of weather and begin a unit of work on lions? Can she take care of the children's immediate interest through a few informal discussion periods?

6. Does a teacher ever interrupt an on-going unit of work for a study of current interest? What criteria can you set up that will help in making such a decision?

7. Mr. Peterson is discussing in class the problem of passing through the halls with his class. Teachers have been notified that the halls have been noisy and that something should be done about the situation. Mr. Peterson's pupils are unanimous in suggesting that monitors should be appointed to supervise the halls, to restrain transgressors, and to report persistent offenders.

Should Mr. Peterson go ahead with the appointment of monitors? What are the difficulties in a monitorial system? What is Mr. Peterson's responsibility when children make a suggestion that he knows is not psychologically sound?

8. Can you judge good teaching solely in terms of the amount of interaction that is present, or must you also consider quality of interaction?

The third grade in Franklin School is having a lively discussion on Holland. One pupil tells of the wooden shoes worn by the Dutch; another talks about the number of skirts the women and girls wear and about their quaint caps; a third reports on the pantaloons of the boys. The discussion is spirited and lively, with considerable interaction among the pupils. Would you say this indicated good teaching?

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———, Toward Better Teaching (National Education Association, 1949). Chapter 3 on "Promoting Cooperative Learning" and Chapter 4 on "Helping Pupils Develop Self-Direction" are particularly useful.

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OTTO, HENRY J., FLOYD, HAZEL, and ROUSE, MARGARET, *Principles of Elementary Education* (Rinehart & Co., 1955). Chapter 12, "Living With Children," deals with making discipline effective, cooperative teacher-pupil planning, controlling the classroom environment, and meeting individual needs.

THOMAS, R. MURRAY, *Ways of Teaching* (Longmans, Green & Co., 1955). Chapter 6, "Modern Techniques in Discipline," and Chapter 7, "Ways of Planning," are particularly useful.

WILES, KIMBALL, *Teaching for Better Schools* (Prentice-Hall, Inc., 1952). Chapters 5–8 give specific suggestions for directing group work.

SELECTED FILMS

Broader Concept of Method: Part I. A 13-minute sound film presenting a frank picture of the teacher-dominated, lesson-hearing type of recitation and the typical effects of this method on pupil attitudes, responses, and learning.
　　Part II. A 19-minute sound film showing students learning to work together, to organize themselves into functional groups, to make and carry out plans, and to present a report of findings. McGraw-Hill Book Co.

Design for Learning. A 19-minute sound film that shows the building of a modern school and explains new departures in school architecture.

Discussion in Democracy. An 11-minute sound film showing how a group of pupils learn the relationship of organized discussion to a democratic society. Shows the role of leaders and participants in preparation and planning. Coronet.

Experimental Studies in the Social Climates of Groups. A 32-minute sound film showing the effects of autocratic, laissez-faire, and democratic social climates on the attitudes and learning of junior high-school pupils. Iowa State University.

Fundamental Skills in a Unit of Work. A 20-minute sound film showing how a skillful teacher can arouse the interest of the class and guide them in developing and carrying out a unit of work. Bailey Films.

Learning Through Cooperative Planning. An 18-minute sound film that illustrates seven basic skills involved in cooperative planning: identifying the problem, collecting information, weighing ideas, making decisions, carrying

out plans, keeping records, and evaluating results. Teachers College, Columbia University.

Maintaining Classroom Discipline. A 15-minute sound film showing how discipline depends upon the approach used by the teacher. McGraw-Hill Book Co.

☐ ATTENTION was focused in the preceding chapter on the problem of human relations which the teacher faces from day to day as she works with a group of children. This chapter is concerned with the same problem except that the setting is changed to one that confronts the educational leader as he works with teachers and other school personnel in an effort to improve teaching-learning situations. The principles necessary to success are the same in both situations. Both enterprises involve the practice of understanding, of respecting what is unique in each human being, of searching things out together, and of creating an atmosphere that makes generous room for one's co-workers.

Curriculum improvement is a cooperative process, and its success depends upon the development of an organization that enables each member of the staff to operate at his highest level of competence and creativity, not only in relationships with pupils but in working with other staff members to improve the whole school program. The primary purpose of any staff organization is to develop a better program of education for children; a closely related purpose is to promote the professional growth of the faculty members involved.

Principles and procedures of cooperative action are not the concern of administrators and supervisors alone; classroom teachers need to be familiar with techniques used in

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Organizing the Staff for Curriculum Improvement

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group study, planning, decision, and action. Teacher-education programs, both pre-service and in-service, provide opportunities for teachers to develop competence in committee work, workshop procedures, child study, and community relations.

The idea that teacher participation in curriculum planning reduces the importance of the position of the administrator is based on a misconception of the function of educational leadership. Experience in industry and in education shows that when a plan is evolved whereby everyone who is concerned participates in developing plans and procedures, morale is improved, individuals produce more, and the position of the administrator is enhanced. Cooperative procedures require a higher level of leadership ability than that required when decisions and policies are made by the official leader alone.

Educational Leadership

Intelligent leadership has been called the *sine qua non* of democracy—the vital organ of a free society. Wherever human beings work in groups, there is a need for leadership. The wise use of human talents requires effective leadership in education as well as in other fields of human thought and action. Human history is filled with illustrations of the degree to which the welfare and success of groups of people have depended upon the intelligence and skill of their leaders.

As problems of living have become more complex and as individuals have found it increasingly difficult to meet their needs singlehanded, the problem of group leadership has assumed greater significance. The selection of King Saul on the basis of his excessive height and his attractive personal appearance did not work out very well even in Ancient Israel. In more modern times the choice of leaders on equally flimsy standards has been disastrous.

The challenge of the second half of the twentieth century to the elementary school cannot be met without a greater expenditure of creative effort on the part of elementary-school personnel than has ever been exerted before. Increasing enrollments, a continuing shortage of qualified teachers, and increasing demands upon the school by a culture in transition call for leadership that is capable of making the best use of the teaching talent available. The situation demands the maximum use of the resources of universities, teachers colleges, schools of education, state departments of education, and professional organizations to recruit and educate capable young men and women for positions of educational leadership.

Educational leadership is exercised, in a society of free men, by those who bear titles indicating their position of "status leadership" and by those

who lead merely because of their knowledge and ability. The university president, the state superintendent of public instruction, the local school superintendent, the member of the board of education, the member of the parent-teacher association, the school principal, the supervisor of instruction, and the classroom teacher are all educational leaders.

When leadership is exercised by anyone in a manner suited to a democratic society, it follows certain principles. The principles that mold an individual's thoughts and guide his actions when entrusted with educational leadership are discussed in the following paragraphs.

Educational leadership is based on intelligence

In a profession that emphasizes the application of intelligence to the solution of problems of living, leadership is entrusted to the man who knows. The magnetic personality, the common touch, and the imposing physical stature no longer suffice. The leader needs a thorough grasp of the entire school program in its social setting—its historical background, its objectives, the relationship among its parts, its methods and procedures. In addition, he needs to be well grounded in the techniques of evaluating the effectiveness of the school program. He cannot rely entirely on his preservice education for these abilities; he must serve as a student and as a practitioner long enough to gain the intimate understanding of teaching that comes only through an integration of theory and practice.

There is a special burden placed upon the supervising principal in an elementary school to acquaint himself with educational methods at all grade levels and in all curriculum areas. It is rather common practice for school boards to appoint as supervising principal the upper-grade teacher, the physical education specialist, or some other teacher whose background has been limited but who has taken courses in administration to learn the duties of the elementary principal. This kind of preparation is not enough. To be truly a leader, the principal must know methods of teaching primary reading; he must know recent developments in the teaching of foreign languages in the elementary school; he must be prepared to assist in the development of a program for science teaching in the elementary grades; he must know the field of child growth and development. Through a program of formal course work, of reading, of attendance at professional conferences, of classroom visitation, the principal whose training has been inadequate must make up for its inadequacy. And even the best prepared educational leader must continue to be a student of education if he is to furnish intelligent leadership for teachers.

Educational leadership is based on personal integrity

Since we teach better by example than by precept, what the leader does is more important than what he knows or what he says. The term "personal integrity," as used here, means that the leader really stands for certain principles and can be depended upon to see that these principles are observed in staff relationships. If he believes in the principle of group planning, he should in practice try to carry out the policies agreed upon by the staff. Unless the leader has this kind of personal integrity, group processes become a form of busywork, and the morale of the staff steadily declines.

The subject of national morality has been given a great deal of attention in recent years. National morality is nothing more than the sum of the characters of the individuals composing the nation. The public schools have a part in building character. It is not surprising, therefore, that the personal lives of educational leaders should be the subject of the closest examination and that personal integrity should be regarded as an essential qualification for leadership.

Educational leadership should be inconspicuous

The effective educational leader is the one who develops confidence in the members of the staff to do things themselves. Instead of keeping himself in the limelight, he is constantly calling attention to the accomplishments of the group and thus building staff morale.

In the film *Broader Concept of Method*, listed at the end of the preceding chapter, a student who was acting as the leader for one of the committees failed to understand the true role of the leader in group planning. He assumed, as many individuals in positions of leadership do, that his function was to tell the members of the group what he wanted them to do. He soon ran into difficulties because several members of the committee failed to see the wisdom of his plans, had other plans of their own, and wanted to participate in formulating the plans for the group. The incident has implications for the work of the educational leader in dealing with staff members. The official leader of a faculty group who is bent on his own personal advancement, who seizes every opportunity to promote his own pet projects, who presides at every meeting of the staff and proceeds to lay out his program for the school, has failed to comprehend the role of leadership in a democratic society. It is the function of leadership to help the members of the group formulate common goals, develop ways of achieving goals, and grow in their capacity to evolve worthwhile procedures.

*Educational leadership should promote
an atmosphere of informality*

Intelligence and informality are by no means mutually exclusive. Just as the common touch is no substitute for intelligence, neither is intelligence a substitute for friendliness and informality in dealing with other members of the staff. By showing an interest in the hobbies, interests, and skills of each staff member, by inviting the staff to his home for social meetings, and by encouraging the use of first names instead of formal titles, the leader can help to create an atmosphere of friendliness that contributes to smoother human relations in the school provided such informality comes from a genuine interest in people. Informality that is a pose is easily recognized as such and frequently resented.

Educational leadership builds morale

Morale-building has been given a great deal of attention in industry and in military circles. Educational leadership, in general, has been slow in recognizing this important factor in the effectiveness of the school staff. Educational leadership has no greater responsibility than that of developing in the members of the staff an *esprit de corps*, a sense of participation in the total life of the school, a feeling that all are engaged in a work whose contributions to mankind are unquestioned, and that each brings his own unique talents to the accomplishment of a common goal. By giving attention to the health needs of teachers, by reducing the teaching load, by helping to improve the social status of teachers in the community, by recognizing outstanding accomplishments, by giving each teacher a feeling of being wanted and appreciated by the school system, by working for good salaries and working conditions for the staff, by keeping the staff informed concerning actions taken in their behalf, by providing attractive classrooms and teachers' lounges, by promoting from within the ranks when possible, by consulting teachers before taking action which will affect them, and by showing a willingness to work with a teacher in solving a problem created by the teacher's own mistake— by these and by countless other methods the leader can help to build better staff morale.

Educational leadership requires vision

The teacher who has no vision of the results of her work in the form of richer and more successful lives for the children she teaches is enmeshed in a sorry round of details. Similarly, the educational leader who does not

visualize the school as an agency for helping each child achieve to the full stature of his capabilities is unfit for his position. The genuine leader must work and strive for educational opportunities that far surpass those provided for children at the present time; he must have a vivid concept of what constitutes adequate educational opportunities; he must rest his faith on a long-range program rather than on immediate ends; he must not let the drudgery of current details obscure his vision for a better tomorrow for the children in elementary schools.

Educational leadership requires the courage to face difficult tasks

There can be no serene skies or easy sailing for an individual who aspires to educational leadership in these times. He must continuously study educational theory and practice; he must keep abreast of the ever-changing social structure in which the school exists; he must utilize opportunities for study and travel; and he must welcome tasks that are difficult. Growth comes through striving, not necessarily through attaining. Great leaders are not developed by the performance of easy tasks. Therefore, competence as an educational leader comes only with courage to face difficult tasks.

Educational leadership employs the methods of democracy

Respect for the individual is the essence of democracy. Without respect for the individual, no educational leader can measure up to his responsibilities. The leader reflects this respect for personality in his dealings with pupils, teachers, parents, and other citizens. Intelligence, personal integrity, modesty, the common touch, the ability to build morale, vision, and courage are all included in the principle of respect for personality or human worth. Without faith in the ability of individuals to work out their own problems if given the opportunity to work on them cooperatively, all other qualifications for educational leadership are to no avail.

The Modern Concept of Supervision

As classroom teaching has moved away from practices based on the mechanistic view of learning toward procedures more in harmony with organismic psychology, the concept of the role of supervision has changed accordingly. Supervision is no longer regarded as dictation and inspection; it is now regarded as guidance and coordination. Supervisors are regarded as

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resource persons subject to call whenever and wherever their services are needed.

The modern approach to curriculum improvement broadens the functions of the supervisor. Supervision is no longer limited to the improvement of instruction; it is concerned with the improvement of all the factors in the home, school, and community that influence the growth and development of children. Furthermore, supervision is no longer considered the responsibility of one person or a few persons; it is a cooperative undertaking involving the entire school staff as well as parents and other laymen. The modern supervisor is qualified by training and experience to render expert technical service in coordinating and guiding the efforts of many persons toward the improvement of buildings and equipment, materials of instruction, and methods of teaching. The principal and the supervisor are no longer commanding officers but are working shoulder to shoulder with teachers to promote the wholesome development of children. *As the need for children to learn democracy by living it in the classroom is recognized, the need for democratic leadership in organizing the school staff for cooperative action follows as a natural consequence.*

The cooperative approach to curriculum improvement applies not only to the local level but to state, regional, and national levels as well. One of the unique features of our American system of education is the fact that there is no official agency in Washington to issue pronouncements about education in the various states. Whatever uniformity exists in the school practices of the several states comes about through the efforts of a multitude of voluntary national organizations, commissions, and committees made up of educators and laymen. *As a result of the conventions, publications, and other activities of these groups, it is virtually impossible for a good practice to spring up in any part of the country without spreading quickly to other sections.* It is a remarkable tribute to the functioning of the democratic process that good school practices spread rapidly to various sections of the country in the absence of any centralized authority for education in the federal government.

The work of the state departments of education in relation to the instructional program has shifted from the publication of mandatory courses of study and inspection to providing leadership for cooperative programs for the improvement of instruction. Leadership is also being provided on the regional level through such instruments as the Southern Association's Cooperative Study in Elementary Education.

Organizing for Cooperative Action

An important responsibility of the *official leader* in any school is that of helping the staff develop and improve the *organization for cooperative*

action. It should be understood, of course, that organizing for curriculum improvement is a continuous process rather than a single act of setting up a finished structure. Since curriculum improvement involves changes in the behavior of individuals, any plan of organization must take into account the experience and ability of the personnel involved and the problems existing in the community the school serves.

Our system of public education places a great deal of responsibility for planning in the hands of the local administrative unit. The principal of an elementary school can, of course, develop his own organization without consulting any members of the staff. This type of organization, however, may actually hinder the accomplishment of the real objectives accepted by members of the staff and consume valuable time that might otherwise be used for constructive purposes. The principle of the consent of the governed is deeply embedded in our culture. The democratic process, although slower and more difficult to manage, seems to get better results in the long run.

The skills required for working cooperatively with a group of teachers are as technical and difficult to learn as those required in any other profession. Teachers who have been accustomed to authoritarian administrative practices over a long period of years find it difficult to unlearn habits of conformity and irresponsibility and to acquire the abilities demanded in co-operative work. Only gradually can they be led to examine and help improve the machinery for cooperative action, for resolving differences of opinion, and for distinguishing between the executive function, which belongs to the administration, and the policy-making function, which belongs to the staff. Teachers, no less than children, learn by doing, and it is the responsibility of those who are in positions of leadership to assist in providing the machinery for participation in group enterprises.

The progress that is being made in defining more clearly the purposes of the elementary school and in developing an organization that coordinates the efforts of teachers in the accomplishment of these purposes has been given a great deal of attention in educational publications. Detailed descriptions of county, city, and state programs in current use are available.[1] It is sufficient, therefore, to present at this point some basic principles that should be followed in setting up an organization for curriculum improvement in an elementary school.

1. *The organization should serve to release the potential abilities of individuals.* In almost any school there are some teachers with much experience, others with little; some with one type of preparation, some with another. All have talents they can share, all have limitations, and all need to grow. The organization in which they work may stimulate growth, encourage

[1] See Hollis L. Caswell and associates, *Curriculum Improvement in Public School Systems* (Teachers College, Columbia University, 1950).

initiative, and release potential abilities. On the other hand, it may stifle growth, discourage initiative, and reduce individual effort to a mere routine of conforming to imposed patterns. The leader who has a broad understanding of human relationships and skill in working with people can encourage each teacher to make her own contribution and still work as a member of the team.

2. *The organization should be flexible enough to permit groups of teachers to work on problems of real concern to themselves.* Organization is a means of achieving real purposes, and when it gets in the way of teachers who have important work to do it should be examined critically. For example, teachers of young children may want to come together to discuss the characteristics of children at that stage of development, instructional materials that have proved to be useful, and ways of working with parents. Teachers of older children may want to work on an entirely different set of problems. The organization should serve the real needs of individuals rather than stand in the way of getting work done.

3. *The success of any type of organization depends upon the climate in which it exists.* A democracy, no less than a dictatorship, requires organization. The organization in a dictatorship exists in a climate of fear and distrust, of arbitrary authority and enforced conformity. In a democracy the organization must exist in a climate of mutual respect and confidence, of authority derived from the consent of the group, and of willingness to work for the success of plans agreed upon by the group.

The administrator is properly concerned with developing an organization that reflects the general policies of the school system; it is important also that he respect the views of the members of his own staff. The success of the organization depends to a large degree upon staff morale. Morale is the factor that enables individuals to live up to their highest possibilities. When the morale of the group is low, each member contributes only a small fraction of what she has to give; when morale is high, members of the group work together in good will and with enthusiasm.

Effective staff relationships are impossible unless the leader demonstrates that group morale is one of his major concerns. Morale grows slowly in an atmosphere of mutual respect and confidence. It can be severely stunted by one false action that shows that the leader has no respect for decisions reached by the group. This situation cannot be remedied merely by developing a new type of organization on paper. *It can be remedied only by the slow process of rebuilding staff morale.*

Effective staff relationships are also made more difficult when the leader fails to take into account the fact that many teachers identify with their groups. That is, the teacher comes to feel that the successes and failures of the group are really her successes and failures. When a group does well in a

school assembly and is commended by the principal, it is just as if the teacher herself had been on the stage; her feelings about self are bolstered. But when the group or an individual in the group is criticized by the principal or supervisor, the teacher feels that the criticism reflects upon her. Adverse criticism of an individual child or a group to the teacher in charge, and particularly before her peers, can be destructive of a wholesome psychological climate. If it is customary for principal or supervisor to do this, group morale will suffer.

Consider the case of Principal Thatcher, for example. He is a kind-hearted person who wants to run a good, efficient school. However, he is not always sensitive to the feelings of teachers. One morning he notes that Miss Smith's pupils are chasing one another around the room before Miss Smith's arrival. When he sees Miss Smith enter the building, he greets her with these words, "It's about time, Miss Smith. Your children are raising Cain down the hall. You'd better hurry along and get them settled."

A few Miss Smiths can take a Principal Thatcher in their stride. But more will feel—as a good mother does—that the criticism of their children is really a criticism of them. Maybe Principal Thatcher has a problem with respect to the conduct of Miss Smith's class before school, but undermining Miss Smith's feelings about herself is not the way to solve it. If Principal Thatcher is as insensitive to the feelings of other teachers in his building as he was in this instance, he will find it difficult to build a wholesome group climate in his building.

The individual school as the center for curriculum study and improvement

The individual school is the functional unit for curriculum-planning. This is true because curriculum-planning must always be done in terms of a specific group of children. There can be no such thing as the best arithmetic program; there can only be a program that is best for a given group of children living in a given environment. The experiences children have in elementary schools improve only as the teachers in their own school gain a better understanding of child growth and development, define more clearly the objectives of elementary education, and increase their skill in guiding child growth and development toward socially desirable behavior.

Parents and other interested citizens can find more ways to participate and see more tangible results from such participation when the planning is done in terms of the immediate neighborhood. Teachers and laymen soon lose interest in a program of curriculum improvement that is initiated by the central office unless it deals directly with problems relating to the individual

school with which they are associated. This is illustrated in situations in which curriculum experts are brought in to initiate and carry out the program of curriculum improvement. When the local professional staff surrenders its function of leadership to outside experts, it is not surprising that practices soon slip back to where they were before the program began. The central factor in curriculum improvement must always be the local professional group; consultants should be brought in only to supply expert knowledge and skill to supplement those of the local group.

How can the staff of an individual elementary school organize for curriculum improvement? What problems are ordinarily studied and how are they selected? How can parents and other interested citizens be brought into the program? These problems are being solved in a variety of ways by good elementary schools throughout the country.

In one public-school system the teachers in the primary grades of several elementary schools became interested in improving practices in reporting to parents on the progress of children in school. The coordinator of elementary education in the school system worked with the principals of the several schools and arranged for a series of discussion groups at the several school buildings. The principal, teachers, and parents explored the purposes of reporting to parents, the relationship between reporting practices and the philosophy of the school, and various types of reporting practices in use in other elementary schools. Out of these discussion groups came plans for experimenting with different types of reporting and for getting the reactions of pupils, teachers, and parents to the various practices. A system-wide committee was selected to work out, with the approval of the superintendent of schools, the general features of a program of reporting to parents that could be used in all of the elementary schools in the city.

In the same school system, the teachers and principals were dissatisfied with the degree of departmentalization existing in the intermediate and upper grades. For more than a decade the teachers in these grades had each been teaching one subject, such as penmanship or spelling, to ten groups of children throughout the school day. Thus, one teacher would teach penmanship to ten groups of children during the day and another teacher would teach art to a different group of children every twenty minutes throughout the school day. The principals and teachers realized that this practice left little opportunity for the teacher to get acquainted with the individual child, to offer guidance as well as instruction, and to provide experiences in co-operative learning. A similar organization was used to study this problem, to visit elementary schools in school systems in which the self-contained classroom was used, and to plan for a more unified organization of the instructional program.

The program for curriculum improvement in the school system men-

tioned above began with problems with which teachers and principals were concerned; involved the participation of principals, teachers, pupils, and parents; led to an interchange of ideas on a system-wide basis; brought in ideas from other school systems; used consultant services from the state university to supplement local leadership; and set a pattern for cooperative action in the solution of many other problems confronting the entire school system. It resulted not only in improving practices in many areas of the school program but in improved staff morale, increased desire for additional professional preparation, and a noticeable pride in the accomplishments of the school system.

The need for system-wide organization

The emphasis on the individual school as the center for initiating and operating the program of curriculum improvement does not minimize the need for system-wide organization and for leadership and stimulation from the staff of the central office. In many of the larger school systems each school is represented by a teacher and the principal in a system-wide curriculum council or council on instruction. In some systems there is an intermediate group, called a regional council, between the individual school staff and the system-wide council. It is the responsibility of the system-wide curriculum council to maintain a program for the kindergarten through senior high school which is unified but flexible enough to allow for special needs and problems of communities served by the several building units. Although these system-wide councils allow for initiative on the part of the faculties of local building units, they provide guidance, stimulation, and an over-all view of the school program for the staff of the individual school.

The system-wide curriculum council is a policy-making group on such matters as obtaining financial support for the instructional program, developing bulletins needed by teachers, releasing teachers for curriculum work, and receiving an accurate impression of the reaction of the public to the program of the schools. In addition to the work of the curriculum council, the personnel of the central office provides support for sound curriculum-improvement work in individual schools. They may provide leadership in establishing preschool work conferences, workshops, and training programs for principals and committee chairmen. They may also arrange to have teachers released from classroom duties one half day each month for cooperative group work relating to the improvement of the curriculum through professional-growth activities, a substantial part of which is devoted to committee work in the building unit.

Caswell gives an admirable summary of the relationship between the individual school and the system-wide program.

> In brief, the "grass roots" approach which views the individual school as the operational and planning unit does not mean that each school in the system should go its own way without regard for the others. It means, rather, that problems which are dealt with on a system-wide or partial-system basis should arise out of work done by individual school staffs and feed back into use through these staffs. The channel is from the individual school to the system and back to the individual school rather than from the top down, as under the traditional system-wide approach.[2]

Providing for participation by laymen

The idea that the school alone cannot provide an adequate education for the modern child—that it requires the whole community—is emphasized throughout this book. Elementary-school principals and teachers are realizing increasingly the importance of working closely with parents and other interested citizens in improving the school program. Many elementary schools, however, fail to utilize fully the contributions of laymen to the improvement of the school program, either because they do not fully understand its importance or because they have failed to organize properly for it.

Lay participation at the individual-classroom level is relatively simple to arrange. Many teachers make use of the special knowledge, hobbies, and talents of laymen in the community in relation to many aspects of the curriculum, such as science, story telling, local history, information about foreign countries visited, art work, and excursions. There are few schools, however, in which every teacher is making full use of consultant help from laymen.

Lay participation at the individual-school level is also common. The improvement of the health program, education for family living, the development of a better system of reporting pupil progress, work with committees in the preparation of a list of objectives for the school, improvement of the school library, and more effective use of audio-visual materials are some of the ways in which laymen are helping to improve the school program. In the better elementary schools, the staff would not think of making any important change in the school program without first discussing it with interested laymen in the community.

Lay participation in the formulation of policies and plans for curriculum improvement at the system-wide level is also important. In some systems provision is made for this by adding lay representatives to the curriculum council; in other systems a separate lay advisory committee has been formed

[2] *Ibid.*, p. 78.

to work with the curriculum council upon invitation. Caswell lists the following reasons for favoring the latter plan:

> It is important that lay participants have clearly in mind their advisory relationship to curriculum work. This relationship is more easily maintained if there are separate committees. Also, there will be many matters requiring consideration by the professional members of a curriculum council that will seem to the layman to be quite technical in nature. Consequently, it is suggested that a lay advisory committee working with the curriculum council upon request may desirably be a part of the administrative organization for curriculum improvement in school systems ready for lay participation.[3]

Plans being used for involving laymen in curriculum-improvement programs vary greatly from one situation to another.[4] Although these plans contain valuable suggestions, it is the responsibility of the leadership in each school system to develop the plan best suited to local needs and circumstances.

Using outside consultants

The practice is becoming rather common of inviting outside consultants to help with the program of curriculum improvement either at the individual-school level or at the system-wide level. These consultants usually come from a teacher-education institution, from the state department of education, or from another public-school system. The use of outside consultants is based on a valid assumption that an outsider can frequently arouse more interest in curriculum improvement, can help the local staff look at the program more objectively, and can bring special knowledge and skills to bear on the solution of problems. These values can be achieved only when the consultant selected brings to the task the competencies needed, knows well in advance what will be expected of him, and does not go into a strange school system and begin to criticize everything he sees going on in it.

Few school systems have on the professional staff enough individuals sufficiently trained in research procedures and the techniques required in curriculum improvement to be able to carry on the program without consultant services from the outside. The job of the consultant is to help the local staff learn how to solve their problems rather than to provide the answers. The consultant is concerned with helping the professional staff and the laymen involved to define their problems and to find the resources and procedures by which the problems can be solved. The services of the con-

[3] *Ibid.*, p. 95.
[4] Helen Storen, *Laymen Help Plan the Curriculum* (Association for Supervision and Curriculum Development, National Education Association, 1946).

sultant should be such that the local professional staff becomes less and less dependent upon him as the program progresses.

Providing time for curriculum work

The curriculum-improvement program that involves adding two hours once a week or twice a month to the heavy schedule of work that teachers are already carrying defeats some if not all of the purposes for which the program exists. Unless curriculum work is regarded as an integral part of the teacher's load rather than something extra that is added at the expense of the time the teacher has left for relaxation and for looking after personal problems; unless at least most of the work can be done on *regular school time* for which the teacher is paid; unless a better time can be found for it than the hour or so immediately after school, when teachers are worn out by the duties of the regular school day—unless some solution can be found for the *problem of finding time for curriculum work, the improvement program is almost certain to result in failure.*

Fortunately, several ways have been found to solve the problem of time. Teachers are paid for ten months although schools are in session only nine months; *thus time is available for curriculum work before school begins.* Summer workshops are conducted jointly by the local school system and a teacher-education institution where teachers can work on curriculum programs while earning credit toward degrees. School is dismissed for a half day once or twice a month to allow *time for committees to meet for curriculum work.* Releasing one or two teachers from classroom teaching for a semester or a year to prepare or edit curriculum materials provides another means of getting a specific job done.[5]

Moving from discussion to action

One complaint frequently heard from teachers in regard to curriculum-improvement programs is "We talk, talk, talk, but we never do anything about it." Curriculum improvement is, of course, a long-range program, but *we cannot sit around and wait until all the facts are in.* If the official leader takes too seriously the advice "You must not go too fast," the faculty is likely to conclude that "we didn't get anywhere." To agree rather quickly on a working philosophy, which can be revised later, *is better than taking a whole year to work on a statement of objectives that is considered to be the last*

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[5] The way in which the schools in Battle Creek, Mich., Denver, Colo., Kingsport, Tenn., and Philadelphia, Pa., have found time for curriculum work is explained in Hollis L. Caswell and associates, *op. cit.,* pp. 125–126, 157, 198, 205, 288–289.

word. Working up some resource units that contain materials and activities that can be tried out immediately in the classrooms is better than holding everything up until the "new" curriculum can be "installed." School leaders who are always absorbed in building a background through study and discussion without ever putting any of the ideas into practice are like the man who took a two-mile run to get up momentum for jumping a fence: when he got to the fence he was too exhausted to jump.

Closely related to the problem of moving from discussion to action is the responsibility the administration has for acting upon the decisions of the group. To have committees at work for months on projects that are ultimately shelved by the administration is destructive of staff morale as well as a waste of human energy.

Techniques of Working Together

Leadership in the modern elementary school is an enterprise in human relationships. It involves the use of techniques for group management that have proved successful as practice in the elementary school has moved away from autocracy toward democracy. Democracy, no less than despotism, requires the mastery of techniques. If groups of teachers are to formulate their own purposes rather than accept the purposes of the official leader, if they are to make their own plans for achieving those purposes, then it is the function of the leader to help them master the techniques for formulating purposes and getting these jobs done. This section deals with some of the promising techniques that have been developed for helping teachers learn to work together effectively.

The teachers' meetings

On the basis of the generally accepted principle that education should help individuals do better the worth-while things they will do anyway, teachers should certainly be interested in the improvement of teachers' meetings. Most teachers spend a great deal of time attending staff meetings of various types, and few would deny that these meetings could be improved. Unless teachers' meetings exemplify the principles of good teaching, the time is largely if not entirely wasted. In the old type of meeting, which was formal and stilted, teachers were called together for routine business, announcements, or to listen to a lecture by the principal or a visiting college professor. The teachers expected little in the form of ideas for better teaching; they felt that the meetings belonged to the principal and that they represented a waste of valuable time.

If teachers can be made to feel that the meetings belong to them, if the agenda is prepared by a committee of teachers, if a pleasant meeting place is provided and an informal atmosphere is maintained, teachers' meetings can result in professional growth for the entire staff.

If teachers' meetings are to promote professional growth, they must be organized around problems that teachers consider important in their work with children. This is not likely to be accomplished if the principal always prepares the agenda and presides at all the meetings. The agenda should be prepared by a committee of teachers elected by the entire faculty for the purpose of planning and conducting teachers' meetings. The agenda containing the items to be discussed should be made available to all members of the staff before the meeting so that each member can be prepared to discuss the items listed. Opportunity should be provided for any member of the staff to hand to the chairman of the committee any item he wants placed on the agenda. Opportunity should also be provided for items to be added to the agenda at the beginning of each meeting. Membership of the committee should be changed frequently in order to make it possible for more teachers to participate in planning the meetings and in assuming responsibility for their success. The chairman of the planning committee should ordinarily preside at the meeting, although another member may be requested to preside if the problem for discussion happens to be one in which he is particularly interested. The planning committee may also be responsible for selecting a meeting place, arranging the furniture, providing refreshments, and securing consultants for the meeting.

The room selected for the teachers' meeting is a very important factor; the worst possible place is a classroom with rows of screwed-down desks. If at all possible, the regular meetings should be held in a room in which the seats can be arranged in a circle or a semicircle. If meetings are held after school, it is desirable to devote the first part of the meeting to social activities and to serving refreshments; this helps to bridge the gap between the regular classroom activities and participation in the teachers' meeting, and its allows the members of the staff to arrive at different times without the embarrassment of breaking into the meeting after it has started.

The time when teachers' meetings are held must be determined by the staff after all factors have been considered objectively and after experimenting with various times. In some schools the hour before school starts in the morning has been found satisfactory; some have met at the noon hour, at dinnertime in the evening, after dinner, or on Saturdays. The most common practice, of course, is to meet after school is out in the afternoon. The length of time needed for the meeting is a determining factor in deciding when it should be held. Some schools have one short meeting each week for routine business and a longer meeting once a month for discussion of policies and

long-range planning. The staff may also want to meet on call for a dinner or after-dinner meeting on occasions when an out-of-town visitor is present.

The curriculum workshop

Workshops have been conducted on university and college campuses and in public-school systems for many purposes and by a variety of procedures during the last fifteen years. Some have been well staffed with competent consultants capable of giving expert guidance to teachers seeking help in many aspects of the public-school program, such as the uses of radio and television in education, conservation education, guidance, selecting and building tests, or the education of exceptional children. Others have had a single staff member available to assist in working out plans for the improvement of a single area in the curriculum, such as social studies.

Some workshops have been organized primarily for the purpose of providing professional growth for the participants. An example of this type is the Annual Association for Childhood Education Workshop, sponsored jointly by the Oklahoma branch of the Association for Childhood Education International, the College of Education, and the Extension Division of the University of Oklahoma. From 60 to 160 elementary-school teachers and principals from Oklahoma and nearby states have been attending these two-week workshops. The staff consists of a full-time director, two lecturers—one for each of the two weeks—who have always been selected from the outstanding authorities in various phases of elementary education, and ten or more leaders for the studios and discussion groups in teacher-pupil recreation, ceramics, children's speech, children's literature, the use of audio-visual materials, mental hygiene, creative arts, elementary-school science, and child development.

The participants in this workshop and many of the staff members live in the building in which the workshop is held, have their meals together, and participate in various social and recreational activities. Membership in this workshop is not limited to any particular type of teacher; no effort is made to conform to the criteria set up by experts as the essential features of a workshop; and no patterns are imported from workshops carried on at other places. Rather, it represents an indigenous movement developed to meet conditions existing in the elementary schools of Oklahoma. The fact that it has been called a workshop could no doubt be traced to the fact that someone on the original planning committee had heard of workshops' being held elsewhere, but neither those who have been in charge nor the participants have ever been concerned about how far the practices were out of line with the aims and ideals of the workshop concept. At any rate, the writer has

found teachers in remote sections of the state who give much of the credit for their increased competence to the A.C.E. workshop.

Another type of workshop is the one that is established to produce instructional materials to be used with adaptations by the participants and by other teachers. For this type of workshop the participants are carefully selected in terms of their ability to produce outstanding materials rather than their need for help from the workshop. Of course, it is expected that participants in any workshop will benefit from the experience in the form of professional growth, but the participants in the production type of workshop are selected primarily because of the competence they have already attained rather than on the basis of the competencies they need to develop through the workshop experiences.

The production type of workshop usually has a director, a secretary and librarian, and several consultants selected because of their competence in the various curriculum areas for which instructional materials are to be prepared. This type of workshop requires a meeting place large enough to accommodate the entire group of participants and a number of smaller seminar or conference rooms for meeting places for the various committees. Materials relating to the various curriculum areas should be at hand and adequate secretarial help should be available.

The brief sketches of types of workshops given in the paragraphs above illustrate the principle that there need be no rigid pattern of workshop procedure. It is true that the early workshops sponsored by the Progressive Education Association for the staff members of the thirty schools involved in the Eight-Year Study exhibited certain common characteristics and that many workshops sponsored by colleges and universities without financial support from an outside agency tried to follow as closely as possible the procedures used in these early workshops. It is also true that some summer sessions have tried to attract students by attaching the name "workshop" to regular summer-session courses. It should be obvious, however, that a workshop, like any other device used in public education, must be adapted to time, place, and circumstance.

Downes calls attention to the fact that workshop procedures, when used in teacher education, are based on the same principles of learning as those utilized in the modern classroom.

> The chief virtue of the workshop is in its emphasis on learning by doing—perhaps another way of saying that twenty-five years after John Dewey's idea began to be applied in the education of children, someone realized that it might be valid also for those persons who were already practicing it on children. If purposing, planning, executing and evaluating are desirable learning activities for children, they are also important for adults. The corollary to this assumption as applied to a workshop—and essential to

it—is the workshop's emphasis on informality, social experience, individual initiative and responsibility, and personality development.[6]

The workshop movement has grown rapidly since the Progressive Education Association provided the idea and the General Education Board of the Rockefeller Foundation furnished the funds for the first workshop at Ohio State University in the summer of 1936. The Progressive Education Association sponsored three workshops the following summer—at Columbus, Ohio, Bronxville, N. Y., and Denver, Colo., and by 1939 was sponsoring ten. By that time the workshop was installed as a regular feature of the summer-session program in almost every college and university participating in the preparation of teachers. The workshop came to be looked upon by enthusiasts as an educational panacea that was destined to replace formal courses in the summer-session program. However, certain factors, such as the additional cost of a workshop, the difficulty in regard to course credit and marks, and the fact that workshops have sometimes degenerated into a variety of meaningless activities, have caused the workshop idea to lose some of its appeal.

Curriculum committees

One of the first steps in organizing the staff for curriculum improvement has usually been to divide the entire staff into committees that meet regularly to study and evaluate school practices. These committees usually prove to be the very heart of the curriculum-improvement program. They make suggestions and recommendations to the curriculum council, which in turn examines the proposals in terms of the system-wide approach to problems and then returns the proposals, with recommended modifications, to the committees for final action. Committees are usually more successful when they are relatively small, when they represent a cross section of the school system, when the members of the committee understand clearly the relationship between their work and the over-all program, and when committee work is considered a part of the teachers' regular duties.

Discussion groups

An increasing amount of attention is being given to perfecting techniques of group discussion as a means of promoting in-service growth of the school personnel. The Association for Supervision and Curriculum Development has given a great deal of encouragement to the development of better

[6] James E. Downes, "An Evaluation of Workshops," *Elementary School Journal*, April 1947, p. 446.

techniques of group discussion as well as to the broader problem of group processes through the procedures used in the annual conventions of the association and through its various publications.[7]

The suggestions in regard to time, place, arrangement of furniture, and other problems given in the discussion relating to teachers' meetings apply also to discussion groups. The following outline is *illustrative of the suggestions available from many sources for making the work of discussion groups more effective.*

PURPOSES OF DISCUSSION GROUPS

1. To select key problems and to define and limit the problems so that they may be profitably explored within the framework of the conference;

2. To explore the selected problems through sharing of ideas and information and to develop new insights into aspects of the problems;

3. To arrive at some decisions about the problems and to prepare a report to the planning committee of the conference;

4. To increase the understanding and skill of participants in the use of the techniques of group discussion;

5. To get acquainted with other members of the Association and other cooperating groups;

6. To discover new and helpful resource materials.

RESPONSIBILITIES OF EACH GROUP MEMBER

1. Participates in the selection of problems and ways of working in the group;

2. Contributes ideas and suggestions related to the problem;

3. Makes short statements, not speeches; talks to the point; keeps the discussion moving;

4. Does not monopolize; does not wrangle over verbal differences or small points;

5. Requests clarification, facts, and information when necessary;

6. Assumes whatever responsibilities are needed to help the group come to valuable and practical solutions.

RESPONSIBILITIES OF THE LEADER

1. Helps the group get acquainted;

2. Helps the group get under way in the selection of basic problems;

3. Helps the group move through practical problem-solving steps in working toward solutions to the problems;

4. Assumes the responsibility for keeping everyone participating;

[7] See especially Association for Supervision and Curriculum Development, *Group Processes in Supervision* (National Education Association, 1948).

5. Helps members find ways of satisfying their individual needs—self-expression, prestige, personal achievement, social contacts, group recognition, etc.;

6. Plans the time carefully so that all points receive due consideration;

7. Tactfully discourages any who would talk too much;

8. Summarizes (a) when a major point is finished, before going on to another, (b) when the discussion has been long drawn out or confused, (c) shortly before the close of the period.

RESPONSIBILITIES OF THE RECORDER

1. Keeps a running account of the main problems, issues, ideas, facts, and decisions as they develop in the discussion;

2. Summarizes points discussed and reports to the group from time to time as the leader suggests;

3. Prepares the final report in collaboration with selected members of the group;

4. Presents the report of the group to the general planning committee.

Preschool conferences

The fact that teachers in many public-school systems are now paid for ten months rather than nine makes it possible to call the staff together for a planning session before school opens in the fall. These conferences vary in length from two days to two weeks or longer. The agenda is usually prepared cooperatively by the administrative staff and the teachers in order to make sure that the problems discussed are the ones that are considered important.

Time is usually provided both for general sessions and for meetings of special-interest groups. Consultants are usually selected cooperatively by the staff and paid by the board of education. It is not unusual for a public-school system to bring in specialists in several areas of the school program from outside the state.

The objectives of the preschool conference include the following:

1. To make plans for the program of curriculum improvement for the coming year;

2. To assist new teachers in becoming acquainted with members of the staff, the philosophy and practices of the school, and the mores of the community;

3. To plan for a more effective use of instructional resources;

4. To develop a friendly working atmosphere among school personnel, parents, and other interested citizens;

5. To foster democratic group processes in the school system.

Professional associations

Local, state, and national associations are exercising an increasingly important function in encouraging principals and teachers to participate in cooperative efforts relating to curriculum improvement. Teachers who take part in the convention programs of these voluntary associations gain experience in group discussion techniques, find out how problems are being solved in other schools, and develop a greater understanding of the teaching profession. The yearbooks, bulletins, and magazines of professional associations help to keep teachers and principals informed concerning recent developments in elementary education.

So much value is recognized in this technique for teacher improvement that many school systems are providing substitute teachers and even paying the traveling expenses of those taking part in national conventions. Frequently classes are dismissed for a day or two to allow all teachers in the school system to attend state or district conventions.

Other techniques

The techniques we have listed through which teachers can learn to work together are only illustrative. Developing a materials center, providing a professional library for teachers, summer camps for both pupils and teachers, travel seminars, demonstration teaching, interclass and interschool visitation, and many other techniques can be used effectively.

Summary

1. It is the responsibility of educational leadership to help the staff develop an organization through which each member can participate in the manner best suited to his talents in the improvement of the elementary-school curriculum.

2. Teacher education, both pre-service and in-service, should provide opportunities for teachers to develop competence in workshop procedures, in the techniques of group discussion, in the procedures used in community analysis, in modern methods of child study, and in effective methods of working with laymen.

3. Educational leadership in a democracy is based on certain principles that mold the leader's thoughts and guide his action when entrusted with the success of others. Educational leadership is based on intelligence, personal integrity, and the common touch. Good leadership promotes an

atmosphere of mutual respect and trust, is inconspicuous, builds morale, and requires vision and courage.

4. Supervision is no longer regarded as dictation and inspection; it is now regarded as guidance and coordination. Supervisors are regarded as resource persons subject to call whenever and wherever their services are needed.

5. The individual school is the operational center for curriculum study and improvement.

6. It is the responsibility of the system-wide curriculum council to maintain a program from the kindergarten through the senior high school which is unified but flexible enough to allow for the special needs and problems of communities served by the various building units.

7. Elementary teachers and principals are realizing increasingly the importance of working closely with parents and other laymen in improving the elementary-school program.

8. The task of the consultant is to help the local professional staff define its problems and find the resources and procedures by which the problems can be solved.

9. Unless curriculum work is regarded as an integral part of the teacher's load instead of something that is added, the program is almost certain to result in failure.

10. It is the responsibility of educational leadership to see that too much time does not elapse between the talk stage and action stage of the curriculum-improvement program.

11. Teachers may learn to work together effectively through teachers' meetings, curriculum workshops, curriculum committees, professional associations, discussion groups, and preschool conferences.

SOME PROBLEMS AND PROJECTS

1. In recent years the group-dynamics movement has exerted tremendous influence upon the way in which educational conferences, teachers' meetings, and workshops are being conducted. Today when teachers meet it is rather common to find a group leader in charge of the discussion, a recorder, who takes notes, an observer, who evaluates the way in which the discussion proceeds, and a consultant, who is expert in the area.

Is this technique best for all educational meetings? Can you think of some meetings where a speech by an expert, a panel discussion, a film, or a demonstration might be better? List some problems teachers might be concerned about, and suggest procedures for a teachers' meeting devoted to each topic.

2. One criticism of the group-dynamics influence as exemplified in the preceding problem is that educational meetings have tended to be concerned with process to the exclusion of content. There has been a good deal of rigmarole in setting up leaders, recorder, consultants, etc.; in having "buzz" sessions, in which small groups state their individual problems; in evaluating sessions in terms of how many teachers talked at the meeting.

What suggestions did you find in this chapter that would be helpful in keeping the emphasis on content rather than process?

3. One helpful contribution from group-dynamics experts has been an understanding of the concept of individual roles that group members bring to a meeting. That is, there are sets of behaviors that tend to be typical of individuals when they work in a group situation. Some members may play the role of "blocker" and be very negativistic and stubborn about all issues; some may be "recognition-seekers" and try to call attention to themselves in various ways.

In your next group meeting, see how many roles you can identify in the course of the discussion. What role do you typically play?

4. Some teachers think that in addition to classroom climate or general emotional atmosphere of the classroom as discussed in Chapter 6, there also exists a "school climate." That is, there is an emotional tone that seems to characterize the whole building. In one school teachers are very competitive, each trying to outdo the others in spectacular achievements. In another, teachers are extremely cooperative, going out of their way to be helpful and friendly. Some schools are characterized by regimentation; some seem to have no order; some a high degree of self-discipline.

What factors are important in establishing a school climate? Does school climate affect the behavior of pupils? In what ways?

5. The behavior of Mr. Thatcher described on p. 170 is likely to make Miss Smith feel inadequate. When a teacher is made to feel inadequate, *what are some possible consequences? How is it likely to affect her relations with pupils? Can you suggest a better way in which the principal might have handled the situation?*

6. *Improvement of the curriculum can only be effected as teachers find ways of meeting individual differences within the classroom. Teachers in the intermediate-upper grades frequently find that this is difficult to do if all textbooks available for use are at the same grade level. A sixth-grade teacher is hardly meeting individual differences if he has all pupils read the sixth-grade reader when some pupils test at a fourth-grade level and others at the ninth. How might cooperative planning by the staff alleviate the problem? What possible solutions might they try?*

7. *Suppose you taught in a school in which the total climate could be characterized only as authoritarian. The principal made all the important decisions and issued orders to the teachers. Teachers were expected to meet rather rigid standards with respect to daily schedules, appearance of the classroom, passing in the halls, etc.*

One educator has said that no matter how tight the situation, teachers can always find room to "wiggle." If you taught in the kind of school described above, where would you look for "wiggle" room?

8. *The tendency noted in this chapter for teachers to share in more and more aspects of the administration of a school is a very desirable one. This should not be interpreted to mean, however, that teachers must take on all of the functions of the school principal. Which of the following functions should be performed by the principal alone, and which should be shared by the staff?*

Deciding the method of distribution of the art supplies;
Arranging with the superintendent for a petty-cash fund;
Setting aside time for a school assembly;
Buying new books for the school library.
On what basis do you make your decision?

9. *Miss Edelen thinks that her school is run very democratically. "We have a very active student council," she says. "Each grade sends a representative. Last week they discussed the appearance of the lunchroom at the close of the noon hour and also what might be done about the papers thrown around the school grounds."*

In your opinion, are these the kinds of problems that most concern pupils, or are they principal-directed problems?

Are there some problems a school council might discuss that would have a more direct bearing on pupil welfare?

SELECTED READINGS

ANDERSON, VIVIENNE, and DAVIES, DANIEL R., *Patterns of Educational Leadership* (Prentice-Hall, Inc., 1956). Chapter 8, "Portrait of a Leader," stresses integrity, grasp of problems, ability to organize, and respect for human personality.

ASSOCIATION FOR SUPERVISION AND CURRICULUM DEVELOPMENT, *Action for Curriculum Improvement* (National Education Association, 1951). Chapter 4, "Organizing for School Improvement," is particularly valuable.

———, *Group Processes in Supervision* (National Education Association, 1948). Describes a variety of school situations in which group planning has been used successfully. Defines and illustrates group thinking, group discussion, group planning, group decision, group action, and group evaluation.

CASWELL, HOLLIS L., and ASSOCIATES, *Curriculum Improvement in Public School Systems* (Teachers College, Columbia University, 1951). Describes the organization used for curriculum-improvement programs in city, state, and county school systems.

CROSBY, MURIEL, *Supervision as Co-operative Action* (Appleton-Century-Crofts, 1957). Chapter 13, "Working with Professional Education Institutions," provides illustrations of cooperative programs involving staff members from teacher-education institutions and public-school systems.

HICKS, HANNE J., *Administrative Leadership in the Elementary School* (The Ronald Press, 1956). Chapter 20, "Evaluating the Quality of Educational Leadership," is particularly useful.

KELLEY, EARL C., *The Workshop Way of Learning* (Harper & Brothers, 1951). Deals with the principles, purposes, and procedures of workshops.

KRUG, EDWARD A., *Curriculum Planning* (rev. ed., Harper & Brothers, 1957). Chapter 10 deals with curriculum planning in local schools and school systems. Explains the functions of consultants, workshops, and committees.

MACKENZIE, GORDON N., and COREY, STEPHEN M., *Instructional Leadership* (Teachers College, Columbia University, 1954). Reports on three years of cooperative study undertaken to improve instructional leadership in the Denver, Colorado, public schools.

RAGAN, WILLIAM B., "Organizing for Effective Instruction," *Educational Leadership*, February 1955. Discusses several basic principles that should govern in setting up an organization to improve instruction.

SCHMIDT, WARREN H., and BUCHANAN, PAUL C., *Techniques that Produce Teamwork* (Arthur C. Croft, 1954). Gives suggestions for setting up goals that make sense to the group, getting staff members to accept responsibility, bringing problems into the open, measuring group growth, and developing team spirit.

WILES, KIMBALL, *Supervision for Better Schools* (2nd ed., Prentice-Hall, Inc., 1955). Shows how supervision requires skill in leadership, in human relations, in group processes, in personnel administration, and in evaluation.

YAUCH, WILBUR A., *Improving Human Relations in School Administration* (Harper & Brothers, 1949). Chapter 4, "Teachers' Meetings," is particularly valuable.

SELECTED FILMS

The following films do not deal specifically with the supervision of instruction or with organizing the school staff for cooperative action. However, they do deal with supervisory practices in industry and in the classroom which have important implications for educational leaders in their relationships with teachers.

A New Supervisor Looks at His Job. A 12-minute sound film in which a young workman who has just been made a line supervisor is shown in an interview with the superintendent. He is told that in his new job he must learn to get results by working with people instead of with machines. The importance of the human element in supervision is made evident. United States Office of Education.

Developing Leadership. An 11-minute sound film that illustrates the qualities required for effective leadership, how to become a leader, and how leadership in a democratic group changes with the will and interests of the group. Coronet Films.

How to Get Cooperation. An 11-minute sound film presenting methods of securing cooperation in a school situation. Coronet Films.

The Supervisor as a Leader. Part I. A 14-minute sound film in which several workmen are asked what they consider to be the qualifications of a good supervisor. To them the four most important are: "Never take credit for someone else's work," "Don't pass the buck," "Don't play favorites," and "Always keep promises."

Part II. A 13-minute sound film that points out that the good supervisor is not afraid to praise his men for work well done. United States Office of Education.

Curriculum Areas

☐ THE NEED FOR communicating
appears early in infancy and increases
in importance as the child becomes
a member of larger and more complex
social groups. The effective use of
language is a prerequisite to under-
standing and cooperation at all levels
of social relationships, is closely asso-
ciated with the thinking and behavior
of the child, and is an important
factor in the development of his
personality. Since language is used in
every phase of the school program, it
has been called the "cement" that
holds the curriculum together.

The language-arts program has
been changing rapidly in the last two
decades as teachers have gained a
better understanding of the nature of
learners and the learning process, the
social uses of language, and the
broader objectives of the elementary
school. The program in the better
elementary schools places less em-
phasis on drill on the forms of lan-
guage and more emphasis on its use
in meaningful situations. Language
activities are more closely related to
the everyday experiences of children,
adapted to individual differences in
abilities and interests of pupils, and
integrated with other phases of the
school program.

This chapter deals with some of
the major features of a modern
language-arts program, the findings of
some of the more important studies
that have been made in the language-
arts field, and problems and issues

Communicating— The Language Arts

Every teacher and probably every par-
ent knows that it is imperative for boys
and girls to learn to read adequately,
to understand the language that they
hear, and to talk and write with clear-
ness, exactness, and correctness. Boys
and girls themselves know that they
must do these things well in order to
realize many of their own purposes.—
PAUL McKEE

relating to the teaching of the language arts. It contains a brief summary of the purposes, programs, and trends in reading, listening, handwriting, spelling, oral and written expression, children's literature, and foreign languages in elementary schools. An illustrative check list for evaluating the language arts program is provided at the end of Chapter 15.

Major Features of a Modern Program

Good elementary schools do not leave the development of language abilities to chance; the program is carefully planned so that each child becomes as efficient as possible in the use of language. It provides for both the incidental learning of language in connection with the everyday activities in which children normally engage and for the systematic teaching of language during periods set aside specifically for that purpose.

Educational research and the experience of successful teachers have provided many guidelines for the development of a functional program of language-arts instruction. An analysis of some of the major features of a modern program of language-arts instruction is essential if teachers are to see clearly the goals toward which they want to work.

Broader objectives

There is general agreement among teachers and parents that children should be taught to read well, listen attentively, speak clearly, write legibly, and spell accurately. However, teachers and parents do not always understand what is involved in reading well or spelling accurately. Reading, for example, involves much more than mere word calling. It involves the ability to comprehend what is read, independence in word recognition, ability to use an index and table of contents, ability to skim through material rapidly, development of attitudes favorable to reading, ability to get information needed from reliable sources, and many other abilities that go far beyond the traditional concept of reading.

There is a wide difference, also, between learning to spell the words in the daily spelling lesson and habitually using correct spelling in all written work done at school and elsewhere.[1] The teacher who understands the broader objectives of spelling provides many opportunities for children to learn to spell in connection with units of work and other curriculum areas.

A clear understanding of the desired outcomes is obviously an important step in planning a program of language-arts instruction. A functional pro-

[1] See Harold G. Shane, Research Helps in Teaching the Language Arts (Association for Supervision and Curriculum Development, National Education Association, 1955), p. 53.

gram cannot be developed unless consideration *is given to the part that lan-guage plays in the growth and development of the child and in the success of our way of life.* It is through the use of language that the child changes from a self-centered to a social being and develops the ability to participate in the social life of his group. The success of a democracy depends to a large extent upon the ability of citizens to communicate freely with one another. The modern program in the language arts, therefore, *is concerned not only with the mastery of the forms of language but with the use of language skills in meaningful situations where they are needed in solving real problems, in participating in planning what is to be done, and in contributing effec-tively to the work of the group.* Understanding, appreciation, attitudes, and interests as well as knowledge and skills are receiving increasing attention in the modern program in the language arts.

Language activities grow out of experience

The language-arts activities in many elementary schools grow out of the everyday experiences of children such as trips, pets, toys, vacation experiences, and current happenings. A fifth-grade boy who had attended a Cub Scout day camp was eager to tell the class about his experiences, although he had previously been timid about participating in oral-language activities. A first-grade teacher, upon showing the class a film about the passenger train, dis-covered that few of the children had ever taken a train ride. The parents cooperated, arranging to take the children on a train ride to the nearest town, about fifteen miles away. The next day the children were eager to talk about their experiences and an experience chart was developed. It consisted of such sentences as the following:

> We took a ride on the train.
> We walked to the station.
> We bought our tickets at the station.
> We gave our tickets to the conductor.
> We looked out of the train windows.
> We saw some cows in the pasture.

An Experience Curriculum in English, a report of the National Council of Teachers of English, contains a wealth of suggestions for relating the language-arts program to such everyday experiences of children as conversa-tion, using the telephone, writing invitations, and keeping diaries.[2]

Educational research supports the practice of helping children develop a knowledge of words and skill in expression by providing contacts with the

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[2] See W. Wilbur Hatfield, *An Experience Curriculum in English,* Report of the Cur-riculum Commission of the National Council of Teachers of English (D. Appleton-Century Co., 1935).

real world around them. Smith cited a study which showed that taking children from the slums on a series of excursions about Cincinnati, through which they learned to know concrete objects for which words stand, provided a vocabulary as rich as that developed by an entire first-year course in reading.[3] Baldridge concluded that three decades of language study point to the need for enriching children's living through firsthand, sensory experiences with the words learned and that we know enough about language to believe that it develops best as an intrinsic part of rich, happy, and varied home and school living.[4]

The language-arts program is unified

The unified language-arts program, with longer periods for uninterrupted work, is in harmony with modern principles of learning. Organizing the activities around large centers of interest capitalizes on the natural interrelatedness of the language arts, develops skills as they are needed in meaningful situations, contributes to individual pupil needs, and develops independence in study.

There is increasing recognition of the interrelationships existing among the language arts. Listening, speaking, reading, and writing are all concerned with the use of words as symbols and with the exchange of ideas. The child's growth in one aspect of language does not take place independently of growth in other aspects. Although the child listens before he talks, talks before he reads, and reads before he writes, these abilities are not developed in sequence so that one is completed before the other is started. Each of the language activities contributes to the others and none of them can be taught well in complete isolation from the others.

Educational research and teaching experience indicate that skills are learned more efficiently when they are put to some real use—learning to spell words used in an invitation or announcement, reading to get information needed in a unit, or speaking clearly and distinctly in reporting an actual experience to the class. After a visit to the zoo, a group of children will have many desirable learning experiences such as writing stories, dramatizing events, and sharing ideas. Separate periods for drill may be scheduled when needed.

The unified program makes it possible to adjust activities to a wide range of abilities and interests. The slow-learning pupil as well as the extremely

[3] Dora V. Smith, "Growth in Language Power as Related to Child Development," in *Teaching Language in the Elementary School*, Forty-third Yearbook, Part II, National Society for the Study of Education (University of Chicago Press, 1944), p. 54.
[4] Marie Baldridge, "Three Decades of Language Study," *Childhood Education Magazine*, November 1949, pp. 117–121.

talented one can make his own contribution to the activity without having to be rated in terms of the accomplishments of others. Since the unit involves a variety of activities, each child can work at a task that is appropriate for him and be recognized by the group for his unique contribution. When textbooks prove too difficult for some pupils, as they frequently do, the opportunity to work with many types of material from many sources offers a solution to the problem of individual differences. The additional interest shown by children in the unit type of program leads to greater effort and more independent habits of work.

In an effort to find out whether the experience type of curriculum or the traditional type produced better results in reading, language, and spelling, Wrightstone equated groups of pupils in both the primary and the upper grades according to their mental age, chronological age, and socioeconomic status. Standardized tests were given to the pupils in the schools in which the teaching was formal and each subject was taught separately and in the schools using varied types of experiences that cut across subject boundaries. The results favored the pupils in the schools using the unified program.[5]

A wider use of books and other resources for learning

Instruction in the language arts once consisted primarily of teaching children the contents of the basic texts in reading, spelling, and grammar. The single text has been supplanted in modern elementary schools by multiple texts, library books, magazines, newspapers, mimeographed materials, workbooks, children's encyclopedias, and many other types of instructional material. The new type of language-arts program, with its emphasis on unified learning, calls for the use of every type of material the community can furnish to serve the language needs of children.

Instructional materials are selected cooperatively by teachers, principals, children, and parents. If the material needed cannot be purchased from the school budget, children and parents cooperate in raising funds and purchasing additional material.

Educational research has contributed greatly to the improvement of textbooks and other reading materials for children. Rinsland collected more than 200,000 samples of the writing of elementary-school children from all sections of the United States in an effort to find the frequency of the use of words, grade by grade.[6] The results of this study have been used extensively by teachers, authors, and students. This study is but one illustration of the cur-

[5] J. W. Wrightstone, "Achievements in English in Activity Programs," Elementary English Review, March 1936, pp. 94–96.
[6] Henry D. Rinsland, A Basic Vocabulary of Elementary School Children (The Macmillan Co., 1945).

rent effort to apply to the education of children the lessons learned from careful studies of children themselves.

Teaching the Child to Read

Teaching children to read has always been one of the most important responsibilities of the elementary school. Every child needs to develop his reading ability fully in order to succeed in school and to discharge his responsibilities later as a citizen of a democratic society.

Reading is the foundation of much of the enjoyment the individual gets out of life and is closely related to vocational efficiency. Reading is intimately related to the success of the democratic way of life. The citizen needs to understand the meaning of democracy and to keep well enough informed to act wisely in its behalf. He needs the ability to detect pernicious propaganda, to weigh the opinions of others, to talk intelligently, and to work effectively with others. American citizens are called upon to make decisions that influence the lives of most of the people in the world. To do this intelligently requires a high level of reading ability.

Since the child needs considerable ability in reading in order to succeed in school, since the adult in our society needs to do a great deal of reading both as a leisure activity and in order to keep up with his vocation, and since the success of our democratic way of life depends to a great extent upon the ability of citizens to read, it is understandable that much attention has been devoted to the improvement of reading instruction. Learning to read is a complicated process, and the teaching of reading requires a thorough understanding of modern methods of teaching, familiarity with a wide range of reading materials, and the ability to understand children.

Many adults can remember when learning to read began with memorizing the letters of the alphabet, progressing later to syllables and phonetic word families. A great step forward was taken when children learned words before they learned the letters composing them. The modern approach to learning to read begins with the life experiences of the child. Then the abstract symbols representing those experiences are introduced, in harmony with the psychological principle that learning is experiencing rather than merely memorizing and repeating meaningless symbols.

The need for improvement in the teaching of reading

There is ample evidence that many children are failing to develop sufficient reading ability to meet the demands of the school curriculum. It has been estimated that approximately one fourth of the failures in the ele-

mentary school are caused by a lack of reading ability; that a number of first-grade children, including some with normal or superior intelligence, fail to get a good start in reading; and that many of those who can read have not developed reading tastes of a high quality and do not read widely. Someone has said that there are three kinds of illiterates: *those who cannot read, those who can read but do not, and those who read mostly the wrong material.*

Such factors as overcrowding of classrooms, rigid promotion policies, inadequate reading materials, and pressure from parents to have children begin reading too early have retarded progress in developing a modern program of reading instruction. The reading program needs continuous study, evaluation, and revision in order to keep it in line with modern principles of learning and the broader objectives of the elementary school. There is urgent need for a better understanding on the part of principals, teachers, and parents of what constitutes an adequate program of reading instruction and for long-range planning for the purpose of giving direction and balance to the day-to-day activities of teachers.

Objectives of the reading program

The objectives of a modern reading program include *extending and enriching the experience of the child; broadening and improving interests and tastes in reading; fostering the personal-social adjustment of the child; providing worth-while recreational interests and skills; encouraging critical analysis of ideas; developing resourcefulness in finding information; promoting self-direction; and achieving satisfactory progress in such basic reading skills as word recognition, vocabulary development, and comprehension and speed.* If these objectives are to be realized, the scope of the reading program must be extended both vertically and horizontally; reading instruction must extend beyond the elementary school into high school and college, and attention must be given to reading in every phase of the school program rather than merely at specified periods.

The importance of reading readiness

Research relating to child development has shown that readiness to do such things as walking and talking appears at rather definite periods. Of course, the age limits for beginning these activities vary with individual children, but it has been found that forcing a child to begin a specific activity before he is ready causes strain, develops negativistic attitudes, and accomplishes little. A child cannot be expected to make much progress in reading until he is ready for it. Studies of retardation in reading indicate *that chil-*

dren who have been introduced prematurely to the mechanics of reading have built up antagonisms to it, have lost confidence in themselves, and have come to expect failure rather than success. When a child is ready for reading he will make rapid progress when taught by any one of a wide variety of methods. A child may be ready for reading anywhere between the chronological ages of four and eight. Girls tend to be more mature than boys of the same age and learn to read earlier. Remedial-reading classes usually have about nine times as many boys as girls.

There is little to be gained from rushing into a program of reading from books before there is evidence that the child is ready for it. Most children who enter the first grade need time to continue to grow, to adjust to group living, and to experience success in small undertakings adjusted to their level of maturity. They need to develop a growing interest in the environment, to develop concepts, to use oral language more effectively, to follow directions, and to develop a desire for learning to read.

Finding out when the child is ready to read

There are many factors that influence readiness for reading. The teacher cannot assume that a child who does not make satisfactory progress in the initial stages of reading is either stupid or lazy; instead, the teacher should assume that he is unready for reading in some respect, find out in what respects he is handicapped, and plan a program for correcting his defects. Principals and teachers in the elementary school have no more important responsibility than that of understanding the factors that influence reading readiness and planning a program of activities for developing abilities needed in beginning reading.[7] The following paragraphs call attention to some of the important factors to be considered.

VISUAL DEFECTS. Vision plays an important role in learning to read. Since reading involves receiving and interpreting visual stimuli, it is necessary for the child to have normal vision before he can read comfortably and with enjoyment. Years ago it was very common for teachers to attribute all cases of nonreading to visual defects. If Johnny could not read, all too typically the teacher's advice was, "Take him to an eye doctor. Have his eyes examined." We now know from the results of research that few cases of reading difficulty are due to faulty vision; the cause is much more likely to be one of the factors discussed below. Nevertheless the good teacher, because of her concern for the whole child, will continue to look for indications of visual defects. The child who must hold materials too close or too far away, the child

[7] See Emmett A. Betts, Foundations of Reading Instruction (American Book Co., 1950), Chapters 8–13.

who has to walk up to the board to see what is written, the child who always misses the ball during games, will be noted by the teacher and, when the evidence exists, she will refer the child to a specialist for testing and correction of the difficulty.

IMPAIRED HEARING. It has been estimated that three million school children have impaired hearing. Defective hearing may retard speech development, which is closely associated with success in reading, and may contribute to a serious personality problem. Although hearing defects may be discovered by use of the whisper test, the audiometer is a more reliable measure. The *Betts Ready to Read Tests* contain exercises the teacher may use to measure the child's hearing ability.[8]

MENTAL IMMATURITY. Some children do not have sufficient mental maturity to profit from a formal program of reading instruction. Memory span, vocabulary of spoken words, knowledge of spatial relationships, ability to see likenesses and differences in objects and words, and attention span are closely associated with mental maturity. If the child is deficient in any of these abilities, conscious effort must be made to help him develop them to his full capacity before a formal program of reading instruction is introduced.

SOCIAL AND EMOTIONAL READINESS. Some children are not well enough adjusted socially and emotionally to succeed in reading. The child who is unhappy, who has difficulty in learning to live with the group, and who lacks confidence in himself has a difficult time learning to read. These children must be identified and helped to make a happy adjustment to school living before satisfactory progress can be made in reading.

BACKGROUND OF EXPERIENCE. Some children have traveled widely and been taught to observe closely, whereas others have never been out of their own neighborhood; some six-year-olds have attended kindergarten, whereas others have not; some come from homes that have children's books and magazines in abundance, whereas others come from homes in which there is very little reading material. The material in even the preprimers may be entirely foreign to the experience of some children. It is the responsibility of the teacher to identify those children who have had a limited background of experience and provide experiences that will make reading meaningful to them.

The teacher can determine when children are physically, mentally, emotionally, and socially mature enough for beginning reading by using intelligence tests, reading-readiness tests, and systematic observation. Some tests that are widely used for this purpose are the following:

California Mental Maturity Scale, *California Test Bureau, Los Angeles, Calif.;*

[8] *Betts Ready To Read Tests* (Keystone View Co., Meadville, Pa.).

Pintner-Cunningham Primary Mental Test, World Book Co.;
Metropolitan Readiness Tests, World Book Co.;
Murphy-Durrell Diagnostic Reading Readiness Tests, World Book Co.;
Gates Reading Readiness Tests, Teachers College, Columbia University;
Reading-readiness tests that accompany basic reading series.

Although the teacher may want to use one of these tests to check her own judgment, it should be pointed out that readiness tests cannot and should not take the place of careful observation by the teacher. Many children do not do well on readiness tests because of factors in the test situation —not in their reading ability. One six-year-old who was reading second-grade material with ease before school entrance almost failed the readiness test because she became confused in following directions. Another able reader did poorly because of his clumsy physical coordination.

The use of check lists in determining reading readiness

Many schools prepare check lists to be used by kindergarten, preprimary, and first-grade teachers in making systematic observations relating to various factors in reading readiness. An example of this type of instrument is shown on the next page.

Developing reading readiness

Everything the child sees, hears, and feels must be interpreted in terms of his own experience. The most important item on the agenda of the first year in school is helping the child gain the background of experience that he needs in order to make reading meaningful. The more pleasure the child gets out of school, the better he gets along with other children, the more opportunities he has to talk and to make things with his hands, the more easily he will learn to read. Good kindergarten and primary teachers help children develop readiness for reading through (1) taking trips and excursions, (2) talking about what they see and do, (3) looking at pictures and discussing them, (4) enjoying stories read by the teacher, (5) dramatizing stories, (6) matching words with pictures, (7) seeing likenesses and differences, and (8) playing reading-readiness games.

Traditional methods of teaching beginning reading

It is difficult for adults to realize how complicated a task it is for a child to learn to walk, to learn to talk, and to learn to read. Learning to read is not a simple process. It is perhaps the most difficult and complex task the

child encounters in the process of growing up. It is not surprising, therefore, to find that many children have difficulty in learning to read, that high-school and college youth are frequently handicapped by low reading ability, and that many adults do very little reading.

The evolution of methods of teaching beginning reading constitutes an interesting study. This problem has received such extensive treatment elsewhere that detailed discussion here would be needless repetition.[9] It should

	High	Average	Low
I. Physiological Factors			
1. Is there evidence of good organic condition, good nutrition, and good health habits?			
2. Is there evidence of normal vision?			
3. Does the child notice likenesses and differences in objects, forms, colors?			
4. Does he have good general coordination when engaging in games?			
5. Does he have a normal amount of energy?			
6. Does his hearing seem to be normal?			
7. Can he hear likenesses and differences in sounds of words?			
8. Does he respond quickly when spoken to?			
II. Psychological Factors			
1. Does the child have a wide speaking vocabulary?			
2. Can he relate a personal experience in logical sequence?			
3. Can he repeat from memory a rhyme or verse?			
4. Can he listen attentively to a story?			
5. Does he listen to directions and execute them accurately?			
6. Can he detect likenesses and differences in word forms?			
7. Does he have a normal span of attention?			
8. Does he have curiosity about books, things, and places?			
9. Does he want to learn to read?			
III. Social and Emotional Factors			
1. Does the child enter into group activities?			
2. Does he form friendships easily?			
3. Does he assume responsibilities well?			
4. Is he free from nervousness, worry, and excessive fears?			
5. Can he work independently without too much help from the teacher?			
6. Does he stay with a task until it is finished?			
7. Can he take disappointments without undue display of emotions?			
IV. Breadth of Background of Experience			
1. Has the child visited parks, zoos, or airports?			
2. Has he had many of the experiences he will read about?			
3. Does he attend Sunday School?			
4. Does the home have children's books and magazines?			
5. Has he attended kindergarten?			
6. Do his parents encourage initiative and independence?			
7. Has he had experience with automobiles, trains, airplanes, and buses?			
8. Has he seen many movies?			
9. Does the home have a radio or television set?			

[9] See Gertrude Hildreth, *Learning the Three R's* (2nd ed., Educational Publishers, 1947), Chapter 8, and William S. Gray, *On Their Own in Reading* (Scott, Foresman & Co., 1948), Chapter 1.

be useful, however, to review briefly the principal methods of teaching beginning reading as a background for understanding current methods. For many centuries, the first step in learning to read was memorization of the letters of the alphabet. It has been said that the Hebrew child centuries ago was given edible letters covered with honey so that he could discover "how sweet the process of learning could be."

During colonial times, the content of the first books children were supposed to read was far removed from the experiences and concepts of children. The *New England Primer* contained such sentences as "In Adam's fall/We sinned all" and "Peter denyed/His Lord, and cryed." In Webster's speller, published about 1800, reading was to be taught as spelling. First the letters were learned separately; then they were put together to form syllables; syllables were combined to form simple words; words were combined to form sentences; and, finally, sentences were combined to form a short story.

The alphabet method of teaching beginning reading was replaced by the phonetic method. Instead of learning the letters first, children were introduced to the sounds that occur in many words; words with similar sounds were arranged in vertical columns, and most of the reading program was consumed by formal practice on sounds. After a long period of overemphasis on mechanical drill in phonics as the principal method of teaching beginning reading, a reaction against phonics began in the 'twenties and reached fanatic extremes in the early 'thirties. It was claimed that no systematic teaching of specific words by any method was necessary if the child was interested in learning to read and that "the best way to teach reading was not to teach it at all."

By 1940 the failure of unplanned, haphazard procedures for teaching beginning reading became apparent, and parents as well as teachers began to insist that greater attention be given to the development of basic reading programs for the purpose of giving the child more independence in attacking new words.

Developmental reading programs today include a systematic presentation of skills for attacking new words. Even at the preprimer level of reading, the teacher directs the pupil's attention to structural elements of a word—its root, suffixes, and word parts in a compound word. The child learns to read words ending in s, ed, and ing when he knows what the root word says. He also learns to read words like *something* and *firehouse* which are made up of familiar words.

At the primer level, when the child has built a small sight vocabulary, the teacher begins instruction on certain sound elements. Consonants such as b, d, l, s, and p, which do not vary in sound when they begin a word, are taught first. These are taught as the child encounters difficulty; obviously if a child knows the sound of the letter (and many bright children make this

association for themselves) he does not need instruction on the sound. Instruction at the primer level also includes consonant blends (*bl, st,* for example) and double consonants that make a single consonant sound (*ch, sh, ng*). Structural analysis is continued along with this type of phonetic analysis.

Beyond the primer level various types of vowel elements are introduced. These include single-vowel letters (*a* as in *hat*), two-vowel letters (*oo* as in *good*), and diphthongs (*ou* as in *house*). At this stage, only one-syllable words are analyzed.

At higher levels of word analysis, the pupil learns to identify a syllable and to apply to each syllable in a word the phonetic skills learned at preceding levels. Additional phonetic skills are also taught—the variant pronunciations of vowels and how to tell whether a vowel sound is long or short.

From this brief overview of word-analysis skills, the reader can see that in order to attack a new word, the pupil must have more skills in his possession than mere knowledge of the sound a particular letter makes. This fact is not always understood by critics who urge the schools to return to an alphabet approach to teach reading. These critics would have the teacher first teach one of the sounds of the letter *a*, then the letter *b*, and so on through the rest of the alphabet.

Learning to read by the alphabet system is very difficult and when it was in vogue many children failed to learn to read. Consider the first letter to be taught—the letter *a*. It may have any one of four different sounds: ă, ā, â, ä (*American College Dictionary*). Eventually the child should be able to call each of these correctly as he meets them in such varied spellings as hăt, āte, dâre, and fäther. But the modern program of word analysis teaches the simplest, least variable sounds first, regardless of their alphabetical order, and proceeds step by careful step to more difficult levels. Such a program is psychologically more sound than one that introduces sound elements with no regard for their complexity.

Specialists in the teaching of reading are generally opposed to reinstating the old approach to reading through phonics. They point out that overemphasis on phonetic methods tends to delay reading with understanding and that more rapid and efficient reading results when the content is meaningful to children. They recognize that the child needs to develop various skills for word perception rather than to depend entirely upon memorizing a series of sounds.

Modern methods of teaching beginning reading

There are many methods that have been used successfully in the teaching of beginning reading. The method or combination of methods that the

teacher selects depends upon a number of factors in the local situation. The competent teacher keeps informed concerning various methods on the assumption that each of them has been developed by intelligent and sincere individuals or groups and that there must be something in each of them that can be used to good advantage. She should be familiar with the experience method, the modified experience method, and the basal-reader approach.[10]

Since detailed descriptions of these methods are available elsewhere, they need not be presented here. There are, however, certain basic principles of method that must be observed in order to ensure success in the teaching of beginning reading. Although the following list is by no means inclusive, it should serve as a useful guide to elementary-school principals and teachers in developing a program of beginning instruction in reading.

1. Beginning reading should grow gradually out of readiness activities and the natural oral-language expression of children. Since each stage in the child's progress in reading involves readiness activities, there is no sharp division between reading readiness and reading.

2. Modern methods of teaching beginning reading recognize and capitalize upon the differences existing among a group of children. Children in any first grade will differ in intelligence, in sensory acuity, in background of experience, and in motivation. The teacher who attempts to use the same methods and materials with all members of the class is doomed to disappointment. Differentiated guidance rather than regimented instruction is the key to success in teaching beginning reading.

3. Modern methods of teaching beginning reading recognize the psychological principle that learning is experiencing. This does not mean that experience charts constitute the only materials for beginning reading; pre-primers and primers have certain advantages that cannot be duplicated in experience charts. Experience charts do play an important role in beginning reading instruction because they make it possible for the child to read sentences that have meaning for him in terms of experiences he has already had.

4. Using small groups to work with is essential if adequate attention is to be given to individual needs. Many first-grade teachers find that a flexible three-group arrangement works well. Children are assigned to the three groups at first on the basis of readiness for reading; one group may begin reading from charts and preprimers, whereas another group may require several more weeks of reading-readiness activities. Frequent transfers from one group to another may be necessary as some children make more rapid progress than others. Some teachers are finding that an individualized ap-

[10] See Lillian Lamoreaux and Dorris May Lee, *Learning to Read Through Experience* (Appleton-Century-Crofts, 1943); and Paul McKee, *The Teaching of Reading in Elementary Schools* (Houghton Mifflin Co., 1948).

proach to reading provides many opportunities for oral reading, which young children seem to need. Issues of the journal, *Elementary English*, for the past several years have carried teachers' accounts of their experiences with this approach.

5. An attractive, stimulating environment for reading is essential. Attention must be given to adequate lighting, heating, and ventilation. Plenty of classroom space, movable furniture, attractive decorations, and a well-stocked classroom library are essential. *The emotional climate of the classroom should contribute to happy, interesting, and successful living; it should be the type of environment in which children use reading to enable them to carry out plans that they have helped to make and that they consider important.*

6. Children must be helped to grow in the ability to recognize new words through carefully controlled vocabularies in the reading materials, through the use of context clues, through the use of pictures and discussions, and through modern techniques of phonetic analysis of whole words rather than mechanical drill on meaningless sounds. There is danger, however, in overcontrolling vocabularies to the point where children read stiff and unnatural prose.

7. *Continuous evaluation of pupil progress enables the teacher to adapt methods and materials to the developmental needs of children.*

8. Teachers in the first three grades consider the primary grades as a continuum rather than three separate grades with sharply defined *minimum essentials* or grade standards. *All pupils are not expected to reach the same level of achievement at the end of the first year in school.*

9. The first-grade teacher moves along with the same group of children into the second and third years of school, so that she has time for continuous study of the children and for adaptation of instruction to individual needs. *Children are kept with their own age groups, as far as possible, during the first three years instead of facing the prospect of failure and repeating the grade.*

10. In some schools there is a preprimary grade between the kindergarten and first grade to meet the needs of immature pupils.

The reading program in the intermediate and upper grades

The reading program in the intermediate and upper grades provides opportunities for further developing those reading abilities emphasized in the primary grades and for using oral reading, work-type silent reading, and recreational silent reading. Some problems with which *principals and teachers are concerned at these levels of the reading program are* (1) building up adequate school and classroom libraries, (2) selecting and using basic readers,

(3) developing a positive approach to the problem of comic books, and (4) making intelligent use of workbooks.

ORAL READING. The purposes of oral reading include (1) developing the ability to convey an author's meaning to others in an interesting manner, (2) serving as a means of self-expression for the child, and (3) providing a means of entertaining and informing the members of a group.

The following suggestions should be useful in improving the teaching of oral reading:

1. Provide a real audience situation for oral reading.

2. Teach the pupil to read a selection as if he were speaking it.

3. Teach pupils the importance of a pleasant voice, correct pronunciation, and rhythm in reading orally.

4. Select materials for oral reading carefully; both prose and poetry should be included.

5. Have the pupil practice reading the selection before presenting it to an audience.

6. Provide opportunities for pupils to dramatize stories, to recite poetry in unison, to announce numbers on a program, and to prepare radio programs.

WORK-TYPE SILENT READING. The purposes of the work-type silent reading program include (1) developing the ability to read in connection with various school subjects, (2) reading for problem-solving, (3) developing the ability to use maps, charts, graphs, tables, indexes, tables of contents, dictionaries, and card files, and (4) developing the ability to take notes, to outline, to summarize, to skim, and to organize data.

The following suggestions should be useful in improving the teaching of work-type silent reading:

1. Provide opportunities for practicing the needed skills in meaningful situations rather than in isolated exercises.

2. Provide a wide variety of reading materials.

3. Stress the improvement of reading not only during periods set aside for that purpose but also in connection with the social studies, science, health, and other curriculum areas.

4. Help pupils learn when to master specific details and when to try to retain only the main ideas.

5. Help pupils learn to take notes, to give a report, to tell a story, and to follow directions.

6. Adjust the difficulty of material to individual differences in interests and abilities.

7. Help pupils learn to adjust reading speed to the material being read.

RECREATIONAL READING. The purposes of recreational reading are to help the child build an abiding interest in reading as a leisure activity, to stimulate

him to read widely, and to help him to enjoy reading material of increasingly better quality.

The following suggestions should be useful in improving the teaching of recreational reading:

1. Provide a wide range of reading materials from the standpoint of difficulty, content, and type.

2. Maintain an informal classroom atmosphere; allow children to select materials within their own areas of interest.

3. Provide opportunities for the child to share with the group a selection he has enjoyed reading.

4. Read a part of a story and encourage children to complete it.

5. Encourage children to browse through books and magazines.

6. Encourage children to recommend books to the class by means of a talk, poster, or some other device.

Materials for teaching reading

Improvements in the teaching of reading depend to no small degree upon the selection and use of suitable materials. The modern elementary-school program demands an abundance of materials suited to the needs and interests of children.[11] The materials must be vital, up to date, accurate, and attractive in format.

The elementary-school library plays an important role in the reading program. The modern library is pupil-centered as well as curriculum-centered; it is a materials center not only for books, pamphlets, and magazines but for recordings, slides, and films as well. It functions as a storehouse of information for teachers as well as pupils, for it contains pictures, resource units, and curriculum guides dealing with all phases of the elementary-school curriculum. Although individual classrooms need collections of books and other materials, the principal supply should be administered through a central library from which books and other materials may be sent where they can be used to best advantage and returned when they have served their purpose.

Teachers report that one of the principal handicaps they face in meeting the educational needs of children is inadequate instructional materials.[12] The amount of money spent per pupil per year for library books varies from as little as 27 cents in some school systems to as much as $2.00 in others. In 1953–54, classroom collections only were the type of library service provided to one-third of the pupils in cities with 100,000 or more population, to more than two-fifths of the pupils in cities with a population of 9,999 to

11 See Harold G. Shane, *op. cit*, pp. 17–18.
12 See *Are These Our Schools?*, Association for Childhood Education International, 1949.

25,000, and to more than one-half of the pupils in cities with less than 10,000 population.[13]

BASIC READERS. One problem that the staff of every elementary school must consider is the use that should be made of a series of basic readers in the various grades. This problem cannot be solved either by the complete elimination of reading textbooks or by making the reading curriculum synonymous with the textbook. The principal and teachers in an elementary school must give attention to the selection of textbooks in terms of the objectives of the reading program and to the maintenance of a balance between the basic readers and other instructional materials. The elementary-school staff should study the suggestions made by authorities in the field of reading, examine practices in outstanding elementary schools, and develop a program that is best suited to local needs and circumstances.

Many school systems are adopting the policy of buying not one basic set of readers for a grade but several sets in smaller quantities. Teachers find that such a plan gives pupils far wider opportunities for reading than when only one basic set is used. Thus, Miss Daley orders six different sets of primers, half-a-dozen copies to a set, for her first grade. This means that her class has access to six times as many books as they did under the old system. The new system is particularly helpful to slow readers, who need considerable reading at an easy level before going on to the next reading stage. At the same time, opportunity is provided for vocabulary growth. Although all basic readers use approximately the same word lists in their stories, there is nevertheless enough variation from one basic set to another so that children are not stunted in vocabulary growth if more than one basic set is used.

The values of a series of basic readers are generally recognized, but it is also recognized that such a series cannot serve as the whole reading program. The basic readers provide the core of reading experiences in the primary grades, but guidance in reading will take the child into many types of reading material and develop independence in reading which will cause him to sample a wide variety of reading materials.

OTHER TYPES OF READING MATERIAL. The staff of the elementary school should be familiar with the types of reading materials necessary for a modern reading program.[14] In addition to foundation reading materials provided by the basic textbook series, the following types of materials are generally recommended:

1. In the primary grades, experience charts constructed especially for each group of children, rather than libraries of charts built up by previous classes;

[13] See *Statistics of Public-School Libraries, 1953–54* (U.S. Department of Health, Education, and Welfare), Chapter 6, p. 23.
[14] See Gertrude Whipple, "Desirable Materials, Facilities, and Resources for Reading," in *Reading in the Elementary School,* Forty-eighth Yearbook, Part II (National Society for the Study of Education, University of Chicago Press, 1949), pp. 160–161.

2. Sets of supplementary books for group reading that are easier to read than the basic readers;

3. Sets of readers in the content fields, such as social-studies readers, science readers, and health readers;

4. Prose and poetry selections that the teacher can read to the class;

5. Single copies of children's literature—at least two copies per pupil—that can be read and understood by the members of the group;

6. Picture books for beginners and good stories for leisure-time reading—at least one copy per pupil;

7. Children's newspapers, pamphlets, and magazines;

8. Dictionaries of suitable difficulty for the pupils;

9. Children's encyclopedias for the intermediate- and upper-grade rooms;

10. Audio-visual resources, such as mounted pictures, film strips, sound films, exhibits, and specimens.

THE PROBLEM OF COMIC BOOKS. Teachers and parents alike are concerned about the fact that comic books offer reading that seems to be fascinating to children. They want to know why children turn to comic books instead of other types of reading material, what harm may come from reading the comics, what types are most objectionable, and what can be done to improve the situation.

The alert elementary-school principal will provide the opportunity for teachers and parents to make a cooperative study of the whole problem of comic books. Such a study will involve analyzing the content of various comic books, finding out how many comic books individual children read, determining the effect of various types of comic books on individual children, taking steps to see that children are provided with the better types of comic books, and making an effort to develop an appreciation for other types of reading material. Parents and teachers should have an opportunity to find out what juvenile-court judges, heads of institutions for juvenile delinquents, psychiatrists, and reading experts think about the influence of comic books on children; how children may be taught to evaluate comic books; and how other communities have developed cooperative programs for dealing with the problem.

The problem of comic books illustrates how conditions existing in our culture have a habit of coming to roost on the doorstep of the school. When adults are generally too busy to read—when their ways of living and the substitutes for reading now in mass production destroy their desire for reading—it is understandable that children also turn readily for learning and entertainment to comic books, the movies, and television rather than to reading. The comic books provide vicariously much of the action, adventure, and excitement that children crave. The pictures carry much of the story so that

children have little reading to do in the process and the language that is used is usually the vernacular of the street.

The professional literature dealing with reading and other language arts, as well as magazines for laymen, contains an increasing number of articles on the comic books.[15] Suggestions found in the recent literature on the problem have significant implications for the reading program in elementary schools. Some of the more important conclusions are as follows:

1. Many juvenile-court judges believe that excessive reading of crime comics induces crime.

2. Those who have had extensive experience in dealing with delinquent children observe that if a child is well balanced and living under normal conditions, he will probably be unharmed by the comics; if he has a tendency toward delinquency, the crime comics will help him on his way.

3. A child who likes the comics will frequently spend too much of his time reading them and neglect to read other books or to spend sufficient time outdoors.

4. Many comic books are printed on cheap paper, have art work of poor quality, and strain the child's eyes.

5. The comics provide an unwholesome release for feelings of aggression and frustration for many children.

6. Many comic books glamorize unwholesome phases of life and exert a powerful adverse influence upon the minds of children.

7. The comics tend to make children impatient with good literature.

8. Crime comics constitute a large portion of the total number of comic books; not more than 10 per cent deal with the classics, Bible stories, science, and social studies.

9. Dealing effectively with the problem of comic books requires the co-operation of teachers, parents, and community organizations.

THE USE OF WORKBOOKS. The use of workbooks in elementary schools has been increasing rapidly in recent years. Like textbooks, they may be used either as valuable resources for learning or as substitutes for good teaching. If workbooks are used merely to enable a teacher to keep a large group of children busy and quiet, their use should be discouraged. If, on the other hand, they provide a means to individualize instruction, help pupils learn to follow directions, provide practice on needed skills, and help pupils develop self-direction and independence, their use should be encouraged.

[15] See the following references: Dora V. Smith, "Literature and Personal Reading," National Society for the Study of Education, Forty-eighth Yearbook, Part II, *Reading in the Elementary School* (The University of Chicago Press, 1949), pp. 226–228; Ruth G. Strickland, *The Language Arts in the Elementary School* (2nd ed., D. C. Heath and Co., 1957), pp. 410–413; Jesse L. Murrell, "Cincinnati Rates the Comic Books," *Parents' Magazine*, February 1950, pp. 38–87; Harold G. Shane, op. cit., pp. 18–19.

Research relating to the teaching of reading

The Association for Supervision and Curriculum Development issued a report in 1955 that listed 191 studies of reading instruction published between 1924 and 1954.[16] The report summarizes research dealing with the following aspects of reading instruction: determining readiness for reading, promoting readiness for reading, the sequence of reading experiences, word-attack skills, speed, comprehension, recognition of individual differences, characteristics of a good reading program, reading and children's interests, the effectiveness of commercial materials, causes of reading retardation, evaluating pupil progress in reading, and the role of oral reading. This booklet is an excellent reference for teachers who are concerned with what research has established about teaching reading.

Listening

Listening is in some respects a more difficult process to master than reading. The child has no control over the rate at which he must listen; he does not have the page before him so that he can go back and re-examine ideas; and the language to which he listens is not always as well organized as that which he reads.

Teachers have always given a great deal of attention to teaching the child to read, but they are just beginning to realize that a carefully planned program for helping the child learn to listen effectively is also essential. In school, as well as in life outside the school, listening is one of the principal avenues for learning. When the child enters school, he has already had a considerable amount of experience in listening, but he must be taught to listen purposefully, accurately, and responsively. The situations in which the child needs to listen effectively begin with the kindergarten and increase in number and intensity as the child proceeds through the elementary school.

Listening is an integral part of the modern language-arts program. The kindergarten child learns to listen to directions given by the teacher, to the stories that are read or told, and to music. Speech development requires careful listening if the child is to learn to pronounce words correctly. Growth in reading and spelling depends upon the ability to listen carefully and to identify sounds with words. Children must be good listeners to enjoy poetry fully, to participate in debates, panels, and forums, and to evaluate ideas presented by speakers.

Listening functions not only in the school but in family life, social life, and business as well. Life situations that require ability to listen include attending church, the movies, lectures, and concerts, listening to the radio,

[16] Harold G. Shane, op. cit., pp. 4–33.

using the telephone, and engaging in conversation. What the individual derives from these and many other activities depends largely upon his ability to listen well, to evaluate, and to use what he has learned.

Several factors influence the effectiveness of listening. Hearing is as important for listening as seeing is for reading. If the hearing of the child is impaired, the teacher must see that school and community health services are utilized to remedy the defects, if that is possible, and alter classroom seating arrangements to place the child in the best position for hearing. Physical factors in the classroom environment such as temperature, noises from the street, or persons moving about in the room may hinder listening. The teacher should make every effort to provide a classroom environment that is conducive to effective listening.

Even if the child is free from hearing defects and the classroom is conducive to listening, a carefully planned program of instruction is necessary if the child is to learn to listen effectively. Listening is not a separate subject to be added to the curriculum but a skill to be developed in relation to many aspects of the elementary-school program. The school assembly programs, radio programs, oral reports, dramatization, recordings and transcriptions, musical programs, sound films, announcements, and discussion groups provide opportunities for developing good listening.

The following suggestions for developing more effective listening in elementary schools may be useful:

1. Make listening an integral part of the curriculum in the language arts, social studies, science, music, and other areas.

2. Provide a classroom environment that is conducive to good listening by attending to temperature, seating, and the elimination of noises.

3. Develop listening readiness by relating the material to previous experiences of pupils, teaching the meaning of new words needed, and stimulating questions.

4. Help pupils develop a purpose for listening, such as listening for enjoyment, to find answers to questions, or to find flaws in an argument.

5. Suit the material to the maturity level, attention span, and previous experiences of children.

6. Provide guidance for pupils in reproducing, summarizing, and explaining what they have heard.

7. Help pupils evaluate the programs to which they listen, to detect malicious propaganda, half-truths, and false claims.

8. Teach pupils the importance of courteous listening for effective group relationships.

9. Make radio listening a valuable part of the curriculum by selecting programs carefully, using programs to motivate regularly scheduled lessons, and planning follow-up activities.

10. Plan for school-home carry-over by encouraging children and parents to discuss and evaluate radio programs to which they listen.

Handwriting

Efforts to improve the legibility of cursive writing in schools began as early as 1850. Spencerian writing, muscular movement, and scales for measuring the quality of handwriting were offered as methods by which cursive writing could be improved. Normal schools of thirty and forty years ago offered courses in penmanship for prospective teachers and many of the graduates can be found in elementary schools today teaching penmanship as a separate subject period after period to successive groups of pupils. These teachers have mastered the intricacies of the "push and pull" exercises, the rows of single-spaced ovals, and the rows of double spaced ovals. They view with considerable alarm the introduction of manuscript writing in the primary grades.

Manuscript writing was introduced on a very limited scale in England early in the present century for the purpose of providing mothers with an *easy method of teaching their children to write*. Soon after Edward Johnston, in 1913, convinced a group of teachers that the system was superior to cursive writing, the movement began to spread in England. In 1922 Marjorie Wise, of England, taught a course in manuscript writing at Columbia University, and the Horace Mann and Lincoln Schools adopted the system. By 1929 more than seven hundred schools throughout the country were reported *to be using this legible style of writing*. In 1946 Freeman reported wide use of manuscript writing in grades one and two with only a few schools using it in grade three.[17] Reports from 470 schools showed that only 100 introduced it before 1935, and 370, or more than three-fourths, have introduced it since that time. The rate at which schools adopted manuscript writing was somewhat higher from 1935 to 1940, but it has continued uniformly from 1941 to the present. If the present rate continues for a few more years, the use of manuscript writing in the first two grades will be almost universal.

The place of handwriting in the program of the elementary school

Handwriting *in the modern elementary school is not an end in itself but a tool for communication and self-expression*. It meets the need that pupils have for recording ideas, writing messages, signing their names, writing letters,

[17] Frank N. Freeman, *Survey of Manuscript Writing in the Public Schools* (Zaner-Bloser Co., 1946), p. 378.

and labeling objects. The school has the responsibility for helping children meet the ordinary demands of modern living by learning to write easily, legibly, and with sufficient speed to suit their purposes. A great deal of time has been wasted in the past in trying to bring all children up to a common standard of ornate penmanship by the use of daily drill on isolated elements. Most authorities now agree that more can be accomplished by developing a desire to write legibly as a matter of simple courtesy, using real situations for the purpose of teaching handwriting, and emphasizing good handwriting in all written work.

In teaching handwriting, as in other curriculum areas, most schools use practical middle-ground approaches. It is generally agreed that handwriting should grow out of the child's normal classroom activities, such as writing invitations, making labels, and preparing material for the class newsletter. This functional learning, however, may have to be supplemented with regular practice periods until sufficient progress has been made in developing skill in writing. Such periods should be brief and should be organized so that each child can work on his own writing difficulties.

Advantages of manuscript writing

Experience in public schools indicates that manuscript writing is suitable for the primary grades and that it may be continued in the upper grades for such purposes as making maps, charts, and graphs. The values claimed for manuscript writing include the following:

1. It is easier for the child to learn and provides a feeling of success early in the school experience of the child.

2. The child learns the same alphabet for writing that he learns for reading.

3. Strain and fatigue on the child's muscles are lessened by eliminating the long, joining strokes used in cursive writing.

4. Manuscript writing is easier to read and involves less eyestrain.

5. It can be used earlier as a tool in science, social studies, health, and other curriculum areas.

6. Children can attain as rapid a rate in manuscript as in cursive writing.

7. Manuscript writing helps the child in learning to read.

Suggestions for teaching handwriting

Courses of study and curriculum guides for elementary schools contain many suggestions for the teaching of handwriting. These suggestions may be summarized briefly as follows:

1. Manuscript writing is recommended for the first two grades at least.

2. The time for beginning cursive writing need not be the same for all pupils. *Some may begin it in the third grade, while others may not make the transition until the fourth or fifth grade.*

3. Manuscript writing may be used in all grades when it serves a definite purpose, such as *making posters, programs, illustrated poems, etc.*

4. The child should be given freedom to develop individuality in his style of writing when satisfactory handwriting standards have been attained.

5. The ordinary work of the classroom should provide most of the practice in writing.

Spelling

Spelling, like handwriting, is a tool used in communicating with others and as a means of self-expression. *The ease and freedom with which the child engages in various forms of written expression of ideas depends upon his ability to spell.* Correct spelling is important for the adult as a matter of common courtesy, as a social asset, and as a vocational tool. Instead of placing less emphasis on spelling, as is sometimes supposed, the modern schools provide many opportunities for learning to spell correctly not only during spelling periods but throughout the day. Efforts are made to develop a consciousness of the need for spelling correctly, to promote self-direction on the part of the child in learning to spell, to provide situations in which children need to learn how to spell certain words, to teach the words children use most frequently in their written work, and to individualize spelling instruction.

A large proportion of the words an adult knows how to spell were learned through use in meaningful situations. *The child learns to spell in many situations other than the formal spelling lesson.* He learns from seeing words spelled correctly in books that he reads at home and at school; in stores and motion pictures on signboards and in newspapers. The modern school, therefore, provides both for the systematic teaching of spelling and for giving attention to spelling in connection with the whole school program.

Modern practices in the teaching of spelling reflect the influence of the newer psychology of learning, research dealing with words that children use in writing, and the trend toward unified teaching.

Principles of learning applied to the teaching of spelling

The concept of learning that emphasizes the modification of behavior rather than *merely the acquisition of knowledge and skills* is illustrated in the

Reading and Reporting

When pupils can read a third-grade reader easily, it may be said that they are independent readers. Since at this level they have acquired successful methods of attacking new words, a reading program that emphasizes word recognition is no longer appropriate for them. Now they are ready for two different types of reading—a recreational type and a study type.

Recreational reading should consist of stories or books that pupils want to read; it is included in the program so that pupils will have the opportunity to develop satisfactory reading tastes under the guidance of the teacher. It is believed that more adults would want to read, and that their reading interests would extend considerably beyond comics and best-sellers, if opportunity for this kind of reading had been provided by the school. Study-type reading, on the other hand, is the kind of reading in which pupils read factual material to find answers to questions and to prepare reports.

Here a fifth-grade pupil reports to her class the information that she has gathered in her study of birds. What are the mechanics of flight? How does a bird have enough thrust to get off the ground? What can be done to encourage more songbirds to nest in our town? To find answers to these or similar questions, pupils read from many different sources, take notes, and prepare reports. Training in searching for and organizing information is helpful for all students; it is particularly important for the bright ones. Teaching pupils reading-study skills is begun as early as the third grade for some pupils, in the intermediate grades for others.

© (Photo, Henry G. Bookstaber, Art Supervisor, courtesy Ridgewood Public Schools)

Children's Delight in a Good Story Knows No Bounds

Many experts in the field of children's literature have expressed concern over whether or not we are developing a generation of children who spend their leisure time on comic books, television, and radio, to the exclusion of good literature. Surveys of the time children devote to television and radio reveal the inroads that these have made on children's leisure hours, and reports on comic books show that their sales have reached astronomical proportions. Yet educators are in agreement that one of the goals of the modern school should be to develop in pupils a desire to read independently and a liking for and appreciation of good literature.

But if pupils are to develop a taste for good literature and a desire to read independently, the schools must look critically at practices that operate against the development of such tastes and habits. In some schools a basal reading series is used throughout the six grades and the reading program consists of the stories in the reader, with questions to answer about the reading. Can you see how such a program might discourage the formation of independent reading habits?

When pupils have been spoon-fed and have not developed a taste for great literature, the teacher may use the story-telling period to stimulate children's interests in good books. The children shown in this picture might be enthralled with *Charlotte's Web* or some other delightful story that captures children's interest because it deals in an insightful way with basic problems of life.

One skillful sixth-grade teacher who found her pupils reading nothing but comics promised her class a story every bit as exciting as those in the comics. The next day the children sat on the edges of their seats while she read Kipling's *Rikki Tikki Tavi* When the teacher asked whether anyone would like to borrow the book to read other stories by Kipling, every hand shot up. Can you suggest other procedures for interesting pupils in good books?

© (Photo: Merrim, from Monkmeyer Press Photo Service)

modern spelling program. How the child spells from day to day in various types of written work, rather than the score he makes on a list of spelling words, constitutes the proof of his learning. Learning through use in meaningful situations rather than through abstract drill is also emphasized.

In teaching the child to spell, the normal steps of learning are observed. The child has firsthand experience with an object in the environment, such as a ball. He hears the word "ball" used to refer to the object; he learns to say "ball"; he plays with the "ball"; he learns to read the word in a sentence; he learns to write it from a copy; and, last of all, he learns to spell the word from memory. The more meaning the word has for the child, the more easily he learns to spell it. All modern systems of teaching spelling utilize the sense of seeing, the sense of hearing, and the kinesthetic sense. Some children learn more readily by seeing the word in its context, some by hearing the word, and others by writing it, but all children learn best when spelling is associated with meaningful situations.

Children learn more readily when spelling is related to purposes that are real to them. By creating situations in which children need to spell in order to write something, by developing a consciousness of the need for correct spelling, and by helping pupils develop initiative and independence in learning how to spell new words, the teacher utilizes the powerful force of pupil purposes in the task of learning to spell.

No single list of words presented to the entire class regardless of interests and needs can meet the spelling needs of all members of the class. Teachers who understand the nature and extent of individual differences realize that graded lists of words represent directional goals rather than uniform grade standards. Some children may already know how to spell most of the words in the list for a certain grade, whereas others may not be able to spell all of them by the end of the year. To expect a higher level of achievement than a child is ready for results in discouragement and dislike for spelling; failing to challenge a child to work at his full capacity is equally harmful. Children need help in setting up their own goals in spelling and in evaluating progress toward these goals. A proper regard for the needs of individual children will lead to individualized instruction in spelling, which allows individuals and small groups within the class to progress as slowly or as rapidly as their ability and effort will permit.

In the modern school, the spelling program takes into account the level of maturity of the child. It is a waste of time and effort to teach children to spell words before they will need them in writing. Words needed in adult life are best learned at the time when need for them arises. If children are required to learn such words purely through drill, they will have forgotten how to spell most of them and will have to learn them over again when they are needed.

Research in spelling

Much research in the teaching of spelling has been done in the last three decades. Shane summarizes the findings of 52 studies published between 1926 and 1955.[18] Two of these studies were published between 1926 and 1930, five between 1931 and 1935, four between 1936 and 1940, ten between 1941 and 1945, fourteen between 1946 and 1950, and seventeen between 1951 and 1955. The summary deals with spelling lists, mistakes in spelling, individual spelling needs, effective spelling instruction, and the correlation of spelling with other facets of the school program.

The Rinsland study, to which reference has already been made, lists the words that representative American children actually use in each grade.[19] The use of this list has made it possible to eliminate from spelling books those words that are clearly adult and that the average pupil will never use in his own writing while he is in the elementary school. The list shows the hundred words that are most useful, the hundred next most useful, and so on for each grade. Although the Rinsland study does not tell the teacher how far down the list to go in any grade, it does provide valuable information concerning which words warrant most emphasis from the standpoint of frequency of use. Hildreth concludes that only about 2,800 of the words in the list warrant teaching because of the frequency with which they are used.[20]

Investigations of achievement in spelling indicate that the best spelling is done in schools where spelling is taught five days per week for approximately twenty minutes each day and is checked in all written work done by pupils. There is also evidence that children make fewer errors in spelling those words they use frequently in their written work.[21]

Spelling in the unified learning program

The unified learning program of the modern elementary school provides many opportunities for using spelling in meaningful situations. The program of experience units permits each child to learn to spell in the pursuit of genuine purposes. In these activities the child is able to see the need for spelling more clearly than in the formal period. This does not mean, however, that the spelling that is done in relation to other school work must constitute the whole program in spelling. Most authorities on the teaching of spelling recommend that from fifteen to twenty minutes daily be devoted

18 Harold G. Shane, op. cit., pp. 48–56.
19 Henry D. Rinsland, op. cit.
20 Gertrude Hildreth, "Frequency as a Factor in Learning to Read and Spell," *Journal of Educational Research*, February 1948, pp. 467–71.
21 Russell G. Stauffer, "Research in Spelling and Handwriting," *Review of Educational Research*, April 1949.

to the direct teaching of spelling from the middle of the second grade on through the elementary school.

Oral and Written Language

The importance of the spoken and written word in influencing the social behavior of people, in improving human relations, and in living and working together is recognized more clearly than ever before. Modern dictators have shown how powerful the spoken and written word may be in forming the minds of men and in promoting group action. In our own country the voice of the President and other national leaders can be brought over the radio to millions of homes and the Voice of America program carries the message of freedom throughout the world. The spoken or written word can be a thing of power and beauty if the content is vital and if it is presented attractively.

Oral and written language are important also from the standpoint of the growth and development of the child. Language plays an important part in helping the child understand the world around him, work and play effectively with others, and gain satisfaction through self-expression.

Much progress has been made in recent years in developing programs in oral and written language in terms of what is known about children. From the evidence we have it is clear that the key to language growth is enriched experience, that growth in language is a part of the child's general pattern of maturation, and that we should not ask a child to write or speak about things he does not understand. It is clear also that a child's speaking and writing are indications of his personal adjustment and that improvements in speaking and writing may depend more upon finding and removing the causes of frustration and conflict than upon extra drill.

Children of the elementary-school age are normally keenly interested in language; the proof of this is found in the eagerness with which they pick up slang and other colorful expressions. They are interested in developing new skills which will give them status in the group and help them become persons in their own right. Developing skills and understanding in oral and written language can, therefore, be a joyous adventure both for the teacher and the pupils if the natural desire for learning is not destroyed by the use of uninteresting material or the formal, drill type of procedure.

Purposes of the program in oral and written language

The first step in improving the program in oral and written language is a clear understanding of the purposes of the program. The following purposes are mentioned frequently in courses of study and curriculum guides:

1. To provide an atmosphere that will encourage the child to speak and write freely about experiences in daily living;

2. To provide opportunities for cooperative group undertakings, personality development, and satisfaction in school work;

3. To encourage originality and variety of expression;

4. To develop the desire for a rich vocabulary to meet individual, vocational, and social needs;

5. To develop the habit of accurate observation, to make the child conscious of the richness of his experience, and to encourage him to express his ideas and emotions;

6. To help the child achieve increasing mastery of the mechanics of writing, such as sentence structure, the use of capital letters, punctuation, and spelling.

Suggestions for improving oral and written language instruction

Modern courses of study and curriculum guides for elementary schools contain many suggestions for enriching and making more meaningful the oral and written language experiences of children. The following suggestions are among those commonly listed:

1. Growth in language is fostered by a classroom environment that permits face-to-face relationships, provides stimulating materials, and maintains a relaxed, informal atmosphere.

2. Rows of seats screwed to the floor, rigid time schedules, and artificial learning activities centering around drill are detrimental to language development.

3. The teacher who has faith in children and knows how to enlist their cooperation can do a great deal to improve the learning environment in any type of classroom.

4. In the primary grades the amount of time given to oral expression should be greater than that given to the written expression.

5. The personality of the child, the influence of the language of his home, and the child's need for security and satisfaction are taken into account in the oral and written language program.

6. Conversation, choral speaking, dramatization, and creative writing are emphasized along with the more formal procedures for developing language skills.

7. The time needed for drill on mechanics is lessened by providing frequent opportunities for use in meaningful situations. What drill is needed is provided in close connection with significant speaking and writing situations.

8. Remedial work in usage is based upon a record of the child's own usage errors.

9. Opportunities are provided for individual and group evaluation of progress under the guidance of the teacher. Instead of coming after a unit has been completed, evaluation of progress goes on continuously as an integral part of the teaching-learning process.

Forms of oral and written expression recommended for elementary schools

An examination of curriculum guides for elementary schools indicates that the following forms of oral and written expression are emphasized:

Oral Expression	Written Expression
1. Informal conversation	1. Letter writing
2. Purposeful discussion	2. Record keeping
3. Messages, announcements, and reports	3. Preparing reports and diaries
4. Dramatic play	4. Creative writing (prose and poetry)
5. Choral speech	5. The mechanics of writing, such as sentence structure, punctuation, capitalization, and the like
6. Observance of social amenities	6. Writing experience stories
7. Story telling, jokes, and riddles	7. Writing labels, signs, and posters
8. Giving and following directions	8. Filling in forms
9. Broadcasting and listening to the radio	9. Giving directions and explanations
10. Club meetings	10. Writing reviews and summaries
11. Using the telephone	11. Taking notes and making outlines

The importance of oral expression cannot be overemphasized. It has been estimated that the average individual talks at least a hundred times for every time he reads or writes. Moreover, when the teacher helps the child build acceptable speech patterns, she is helping him to increase his power to read and write. Many excellent publications are available to help the teacher utilize opportunities for oral expression that exist throughout the school day in connection with school subjects and activities.[22]

In classrooms where there is a rich program of learning activities, it is rarely necessary for the teacher to set up artificial situations to encourage

[22] Two very useful sources are: Matilda Bailey, et al., *Language Learnings* (American Book Co., 1956); and Bureau of Elementary Education, *Teachers Guide to Education in Later Childhood* (California State Department of Education, 1957), Chapter 11.

language expression. As children study about their social and physical world, they learn things they can share with another class, with the whole school in a school assembly, or with their parents at a parents program. To prepare for the program, they must read for information and write reports; they must engage in class discussions to plan the program; there are invitations to write and permissions to secure. Finally, there is the program itself, and the presentation of reports or stories to the audience. Activities such as these are in contrast to the language class where children are assigned to write a composition on "How Electricity Travels" or "Life in a Feudal Community."

They are also in contrast to artificial situations set up to promote oral language development. Many primary teachers include in their daily schedules time for "Show-and-Tell." Children are encouraged to bring in an interesting object from home, to show it to the class, and to tell about it. When a child has something worth-while to show and tell, he should indeed be encouraged to do so. The child who finds a cocoon, an interesting shell, or a picture relating to what is being studied should share his find with the class. But it is questionable whether such a period should be regularly scheduled in the daily program. As a part of every school day it too often degenerates into a period where children will display objects of no interest to anyone, including themselves, just for the sake of having a turn. Meanwhile the captive audience is enjoined by the teacher to sit still and listen politely.

Language-arts activities rarely need to be planned solely to give children practice in speaking or writing. Activities such as creative writing and dramatics foster creative expression as well as language practice. Announcements, directions, class discussions fill a practical value by communicating needed information. When the school day is full of meaty learning activities, language is needed to carry them out. And when either oral or written language serves a legitimate purpose recognized by the class, children are more easily motivated to improve their language expression.

This is not to say that all children's needs in oral and written expression can be taken care of in connection with other subjects. A separate period is needed for remedial work, for vocabulary-building, for direct instruction on how to write a sentence or a paragraph, for help on how to express oneself more clearly, forcefully, correctly, and creatively. But in the modern language program, such instruction is related to and grows out of the child's language needs in other areas; these skills are not taught as ends in themselves.

Dramatic activities in the language-arts program

Dramatic activities that have valuable contributions to make to the language-arts program include dramatic play, dramatization, work with puppets, pageants, pantomime, and tableaux.

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Dramatic play centers around social experience; the child identifies himself completely with the character he portrays. He does not act a part as in dramatization; rather, he is the person or thing he represents. This is a favorite activity of children before they reach school age when they engage in playing house, playing school, or playing train. After they start school they gradually become acquainted with a wider range of experiences and learn to carry on dramatic play with a larger group of children under the direction of a teacher who knows how to use techniques that make the activity profitable and enjoyable. Dramatic play is useful for pure enjoyment, for helping pupils grow emotionally, for revealing incorrect concepts, for developing good conversation, and for providing an opportunity for learning related to the natural and social environment. If the teacher really understands young children, dramatic play will never be used for putting on a show, but simply to provide an opportunity for the children to do something that is interesting and worth while for themselves. As they begin to feel themselves a part of the school, children may want to do something for another class or grade.

In general, dramatic play is most suitable for young children and decreases in effectiveness as children grow older. Certain types of equipment are essential for making the most effective use of dramatic play. Dolls, toy trains, toy airplanes, blocks of various sizes, and materials for improvising costumes are useful in providing experiences relating to familiar phases of everyday life.

Dramatization of familiar stories and poems may begin in the primary grades, but it is particularly useful at the nine-year-old level and beyond. Because it is more formal than dramatic play, its usefulness increases as the usefulness of dramatic play decreases. Dramatization is not imposed upon children by the teacher; rather, stories are dramatized because children like them. The teacher provides guidance for the children in planning and evaluating but does not dominate the situation. The pupils are free to interpret the spirit of the story as they understand it and are not forced to reproduce the exact language of the story.

A great deal of planning and organization takes place before the actual dramatization of a story. The teacher sees to it that all children participate rather than just a few of the most gifted ones. The steps involved in dramatizing a story include reading and discussing the story, deciding whether the story lends itself to dramatization, listing characters, selecting equipment, selecting pupils to play the various parts, discussing the personalities of the characters in the story, preparing to dramatize the story by getting better acquainted with the action and conversation of the characters, dramatizing the story, making individual and group evaluations, and re-playing the story.

Puppet and shadow plays provide an effective means of teaching appreciation of literature, constitute a release for tensions of the inhibited child,

and enable the timid child to express himself more freely because he is separated from the audience by a screen. Hand puppets made from clothespins, wooden jump figures manipulated by strings, shadow puppets made from cardboard mounted on sticks, stuffed puppets, and marionettes controlled by strings are types that can be used successfully by elementary-school children.

Pageants, pantomime, and tableaux are other types of dramatics that are adapted to use in elementary schools. They provide enjoyable experiences for children, foster creative expression, and develop an appreciation of literature and history.

Literature for Children

Books written especially for children are available in greater quantity and better quality than ever before. Many public libraries are well stocked with books appropriate for children of the elementary-school age; the better elementary schools have central libraries and classroom libraries containing children's books selected from approved lists; and teachers are working with parents in the selection of appropriate books for home reading. There is evidence, however, that many teachers and parents fail to take full advantage of these resources for helping children acquire a love for reading. One survey indicates that only one adult out of every ten visits a public library regularly.[23]

Good books make many contributions to the enrichment of living. They cannot serve as substitutes for direct firsthand experience, but they can add greatly to the richness of living for both children and adults. Well-written books for children provide a means of gaining information, of extending experience, and of relieving tensions. They can help the child see his personal problems in their perspective, develop sensitivity to the ways of living of people of other lands, and enrich leisure living. The use of reading for the purpose of developing better social-emotional adjustment is receiving an increasing amount of study.[24]

Teachers generally recognize the importance of meeting the emotional needs of children, and books of the right kind do much to develop stable, well-adjusted individuals. The feelings of security, of achievement, and of being accepted by the group are fostered when children enter vicariously into the experiences of their book friends. Books help children develop an appreciation for moral and spiritual values, satisfy the desire for beauty, and pro-

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[23] Robert D. Leigh, *The Public Library in the United States* (Columbia University Press, 1950), pp. 32–33.
[24] See Hilda Taba, *Reading Ladders for Human Relations* (American Council on Education, 1947); and Association for Childhood Education, *Helping Children Solve Their Problems* (The Association, 1950). See also William S. Gray, *Promoting personal and Social Development Through Reading* (University of Chicago Press, 1947).

vide an avenue of escape from time to time from the monotony and routine of daily living. Teachers must be alert, however, to discover children who have a tendency to spend too much time in the dream world and lose their sense of reality.

If teachers are to make full use of the rich legacy that exists in the form of good books for children they must know hundreds of books in many fields, their strengths and weaknesses, and they must also know a great deal about the interests and needs of the children for whom the books are intended. A book that the teacher or parent regards as a classic is not a good book for a particular child unless he can read and enjoy it. Scores of incidents illustrating the wide gap that exists between the teacher's appreciation of a book and what the child thinks of it can be drawn from actual classroom situations. One of the best illustrations is provided by the child who told the teacher, "This book tells more about penguins than I care to know."

The world of books can be made fascinating for children by the teacher who reads aloud to the group, displays pictures related to the material read, relates interesting facts about the author, and encourages children to read interesting books. The teacher begins at the level where the pupil is, selects books that are related to his background of experience, and works gradually toward the improvement of tastes in reading. The program in children's literature should be conducted in an informal manner so that children look forward to it as a pleasant experience.

The procedures used in teaching the child to read determine to a great extent the enjoyment he gets out of books. There can be little doubt that some teachers, in their ardor for teaching the skills of reading, overlook the effect of the process on the child's desire to read good books.[25] On the other hand, the teacher who is concerned with the effect the reading program has on the child's enjoyment of books looks for answers to the following questions: Does he turn naturally to books in his spare time? Is he eager to discuss the books he has read? Does he suggest that others read some of the books he has read? Does he express positive likes and dislikes for characters in books? Has he developed new interests through reading? Does he like to read?

Parents and teachers need help in evaluating books for children, for these, like books for adults, vary widely in quality. Informational books should contain significant and reliable content, have illustrations of high artistic quality, and be suitable for the age of the children who will use them. Story books should be ethically sound, well written, and full of action. Suggestions for evaluating books for children are available from many sources.

[25] See Lois Lenski, "What Are Books For, Anyway?" in *Elementary School Libraries Today*, Thirtieth Yearbook, Department of Elementary School Principals (National Education Association, 1951), p. 271.

One of the best sources, May Hill Arbuthnot's *Children and Books*, contains an excellent analysis of the basic needs of children that can be supplied through reading good books. It also points out the values to be derived from such types of literature as Mother Goose, ballads and story-poems, poetry, verse choirs, folk tales, fables and myths, historical fiction, animal stories, biography, and informational books.[26]

Experts in the various fields have prepared carefully culled lists of books for children. These lists may be found in publications such as the *Horn Book* magazine, Wilson Library Bulletin, the *Booklist, Children's Catalogue,* and Snow's *Basic Book Collection for Elementary Grades.* Courses of study and curriculum guides for elementary schools usually contain suggestions for the selection of books for various purposes, and the Association for Childhood Education International publishes lists of the best books to be purchased for seventy-five cents or less.

Foreign Languages in the Elementary School

The introduction of foreign languages into the curriculum of elementary schools has been one of the most rapidly developing movements in elementary education in recent years. Data relating to the rapid growth of this movement are presented in Chapter 16. It is the purpose of this section to examine some of the reasons for teaching foreign languages in elementary schools, what languages should be taught, at what age children should begin the study of a second language, and some principles and techniques of teaching foreign languages to children.

Why teach foreign languages in the elementary school?

There is an urgent national need for citizens who can communicate in more than one language. The new role of our country in world affairs creates a need for linguists as well as engineers, scientists, and technicians. Our techno-technological know-how is eagerly sought by people in many lands, but technical experts cannot work effectively unless they can communicate directly with the people they are attempting to help. Educators and laymen alike recognize that preserving democratic values in an increasingly interdependent world depends to a large extent upon removing language barriers.[27]

A second reason for introducing a child to a second language lies in the

[26] May Hill Arbuthnot, *Children and Books* (Scott, Foresman & Co., ed. 2, 1957).
[27] See Hollis L. Caswell, "Modern Languages in a Modern Curriculum," *Education,* April 1955.

fact that it enriches and adds interest to his entire program of studies.[28] Teachers have found that a study of a second language contributes to the achievement of the objectives of many of the areas included in the curriculum of a modern elementary school. For example, the study of a foreign language frequently stimulates a greater interest in vocabulary, literature, and dramatics on the part of children in the elementary school. The emphasis on international understanding in the modern social-studies program creates a need for understanding other peoples through a study of their language. Teachers have also found that the study of a second language lends variety and interest to arithmetic, science, and art in the elementary school.

Typical reasons given by 936 schools for offering a second language in the elementary school were as follows:

1. Promotes appreciation and understanding of other cultures and broadening world understanding;

2. Serves as a challenge for gifted children;

3. Is more easily learned in early years;

4. Ensures greater proficiency in foreign language in high school;

5. Improves pupil's command of English;

6. Provides more adequate preparation for travel, work, and living outside the United States;

7. Is consistent with the trends of the times;

8. Creates more interest in other languages.[29]

What foreign language should be taught?

The study cited above reports that 461 elementary schools offer Spanish, 322 offer French, 42 offer German, and 10 offer Japanese, Slavic, or Norwegian as a second language. The bases for selecting the particular language taught include availability of teachers, social and economic need, and cultural development. A leading authority on the teaching of foreign languages in the elementary school suggests that the local cultural situation should be taken into consideration when deciding what language to teach.[30] He calls attention to the fact that many international conferences are conducted in English and French, that the population of our neighbor, Canada, speaks French officially as well as English, that in New England and Louisiana there are many communities in which French is the native language of a majority of the population, and that French provides about one third of the

[28] See Theodore Andersson, *The Teaching of Foreign Languages in the Elementary School* (D. C. Heath & Co., 1953), pp. 40–42.
[29] Elizabeth Henson, "What about Teaching a Second Language to Elementary School Children?," *Childhood Education*, April 1958, pp. 367–70.
[30] Theodore Andersson, op. cit., p. 25.

stock of our English language. Consequently, French is selected as the second language to be taught in a large number of schools.

Because Spanish is spoken by some of our closest neighbors and by more than two million of our own citizens, elementary schools in the Southwest and West generally introduce Spanish as the second language. Like many other immigrant groups, the Germans have contributed notably to our national culture. It is understandable, therefore, that cities such as Baltimore, Cincinnati, Cleveland, Indianapolis, and Milwaukee, with heavy German populations, should select German as the second language.

At what age should children begin the study of a second language?

The prevailing practice seems to be to introduce a second language at the third- or fourth-grade level. If a second language is introduced at all in grades below the third, it is usually limited to a few phrases of greetings, a few songs, some common nouns, and counting to ten. Some reasons for introducing a second language at the third- or fourth-grade level include the following:

1. The child's interest in new sounds seems to be high at eight or nine years of age.

2. Children eight or nine years of age seem to have great ability to imitate sounds they hear.

3. By the third or fourth grade most children have become well oriented to school routine.

4. The printed page in his own language usually makes sense to the eight- or nine-year-old child.

5. By the fourth grade at least the content of the social-studies program usually deals to some extent with countries other than our own.[31]

What are the basic principles governing the teaching of foreign language in elementary schools?

The scope of this section prohibits a detailed discussion of methods of teaching a second language in elementary schools. Many of the accepted techniques are similar to those already presented in this chapter regarding the teaching of other phases of the language-arts program. Moreover, a

[31] See Margit W. MacRae, *Teaching Spanish in the Grades* (Houghton Mifflin Co., 1957), p. 21.

number of books, pamphlets, and curriculum guides dealing specifically with this problem are available.[32]

Some basic principles that are emphasized by specialists on the teaching of foreign languages in elementary schools are as follows:

1. The creation of suitable visual impressions is important. Imitation plays an important part in the language-learning process. The whole behavior of the person speaking a foreign language is observed by the children. If the teacher is a native speaker of the language being taught, the children learn to imitate her total behavior. If the teacher is not a native speaker of the language, similar results can be achieved by inviting a native speaker into the classroom or by taking the class into an environment where the language is spoken. Another possibility is the use of sound films or television programs.

2. The creation of a "climate of sound" is important. Children are intrigued by the sounds of foreign words and learn to speak the language easily. If the teacher is a native speaker of the language, it is easy to create this new climate of sound. If the teacher is not a native speaker of the language, she must learn to imitate a native speaker and use recordings, radio, television, and resources persons to provide constant examples of how the language is spoken.

3. Learning by doing is important is the language-learning process. The love of action is universal with children. The teacher of a second language builds on this characteristic of children in many ways. Playing games, singing songs, dramatizing, and working with puppets are only a few of the possibilities for action.

4. The second language should be integrated with other curriculum areas. The social-studies program is rich in opportunities for creating an interest in a second language. How children in another country live, what their homes are like, what games they play, what songs they sing, what hobbies they have, and what holidays they celebrate are problems relating to both social studies and a second language. Art and music also provide many opportunities for relating language study to other aspects of the school program.

5. Continuity is important in the learning of a second language. The learning of a second language takes slow, patient, and cumulative experience. The program must begin early in the child's school experience and continue

[32] See the following:
  a. *Spanish for Boys and Girls, Elementary Grades* (State Department of Education, Santa Fe, New Mexico, 1955);
  b. *Modern Languages in a Modern Curriculum* (State Department of Education, Madison, Wis., 1950);
  c. *Instructional Guide for Teaching Conversational Spanish in the Primary Grades* (Dade County Public Schools, Miami, Fla., 1955);
  d. Same as (c) for intermediate grades.

as long as he is in school if he is to acquire adequate knowledge of a foreign language. A carefully planned sequence of hearing, speaking, reading, and writing is also imperative if we are to avoid the mistakes of the past in the matter of teaching foreign languages.

Summary

1. It is by means of language that children can avail themselves of the cultural heritage and prepare for the intellectual and social cooperation involved in democratic living.

2. The primary purpose of the language arts is to promote the wholesome growth of the child by helping him to meet as effectively as possible those life situations involving the use of language.

3. Language expression is a form of social activity and must be taught in a free, informal social environment.

4. Research in relation to the language arts points to the need for enriching children's living through firsthand experiences.

5. There is a growing recognition that reading, listening, writing, and speaking are intimately related as the child learns to use language more effectively.

6. The purposes of reading in the elementary school have been expanded to include extending and enriching the experiences of the child, providing a means of self-realization, improving the use of leisure, promoting emotional stability, and preparing the child for intelligent living in a democratic society.

7. The scope of the reading program has been extended both vertically and horizontally.

8. Reading materials have been expanded to include not only basic readers but materials adapted to various levels of achievement, library books, periodicals, reference books, teacher-composed materials, news articles, timetables, and a wide variety of other materials.

9. The reading program needs continuous study, evaluation, and revision by the staff of the elementary school in order to keep it in line with modern principles of learning and the broader objectives of the modern elementary school.

10. Using reading-readiness tests and by means of systematic observation, the teacher must find out what children are physically, emotionally, mentally, and socially mature enough to read.

11. The most important item on the agenda of the first grade is helping the child to gain the background of experience that he needs for reading.

12. The better elementary schools are not going back to the old type of

phonics teaching but are going forward to the development of techniques that are more in harmony with modern principles of child growth and development.

13. The reading program in modern elementary schools provides for reading readiness, beginning reading instruction, oral reading, work-type reading, and recreational reading.

14. The positive approach to the problem of comic books consists of analyzing the content of the comics, determining the influence of individual comics on individual children, providing better comics, and developing an appreciation of other types of reading materials.

15. Workbooks cannot substitute for good teaching. Personal contacts between teachers and pupils are essential if the learning experiences provided in school are to function in everyday living.

16. Children learn to listen more or less automatically but they must be taught to listen purposefully, accurately, critically, and responsively.

17. A great deal of time has been wasted in trying to bring all children up to a common standard of ornate penmanship by the use of daily drill on isolated elements.

18. More can be accomplished by (a) developing a desire to write legibly; (b) using real situations for the purpose of teaching handwriting; (c) emphasizing good handwriting in all written work; (d) discovering individual difficulties and correcting them; and (e) developing genuine purposes for writing.

19. The modern school provides for both the systematic teaching of spelling and for giving attention to spelling in connection with all written work done by pupils.

20. Developing skills and understandings in oral and written language can be a joyous adventure for both teacher and pupils if the natural desire for learning is not destroyed.

21. Educators and laymen alike recognize that preserving democratic values in an increasingly interdependent world depends to a large degree upon removing language barriers.

22. A second language is more easily learned in early years than later.

23. French, Spanish, and German are the languages most frequently introduced in the elementary school as a second language.

24. The second language is usually introduced in the third or fourth grade.

25. The techniques of teaching a foreign language in the elementary school have elements in common with modern methods of teaching other language arts.

SOME PROBLEMS AND PROJECTS

1. One of the principles developed in this chapter has been that the child learns best when he is ready for the task. In reading, therefore, we would not expect that merely because a child is six he is mature enough to learn to read. Would this principle also work in the opposite direction? Would some fours and more fives have sufficient maturity to learn to read? Is there as much danger in postponing reading too long as in presenting it too early? What might be the reaction of the very bright child to beginning reading if he started at 6½ as compared with 5½?

2. An account of the early development of Sir Francis Galton reveals that at four years of age this genius could read any English book, knew all the Latin substantives, adjectives, and active verbs, could do any sum in addition, and knew almost all of the multiplication tables. What difficulties might Sir Francis encounter if he found himself in a first grade where the teacher interpreted adjustment to the maturity level only in terms of postponing learnings?

3. Examine as many sets of preprimers and primers as are available for your use. To what extent do they picture only white, Nordic, middle-class children? To what extent do you find all races, nationalities, and classes of Americans represented?

As a primary teacher, how can you plan to make up for any deficiencies that you find?

4. Examine one of the preprimers also from the standpoint of linguistics. Begin by listing the vowels, a, e, i, o, u. After each, write the words containing the vowel that you find in the first ten pages of the preprimer. Analyze the sound each vowel makes in the word in which you find it. Which letters are used to make more than one sound? How would you make use of your findings in teaching children to read?

5. Children in the intermediate grades are taught the kind of reading that college students must do in carrying out their assignments. The skills involved in this work-type reading differ in certain ways from those that are used in recreational reading. Here are some of the skills:

  a. Learning to use the index,
  b. Reading to get the main ideas in a chapter,
  c. Reading for details,
  d. Outlining,
  e. Summarizing,
  f. Learning to adjust reading rate to the purpose for which one is reading.

Describe some practice exercises that a fifth-grade teacher might use to help children acquire these skills.

6. When a young child first learns to walk, he walks so much that sometimes his legs give out from under him. When he first learns to ride a tricycle, he wants to ride and ride and ride. The learning of each new skill brings with it a desire to practice that skill. This is true in reading also. The beginning reader wants to read and read—but out loud and to an audience, for that is his only way of testing himself to see whether he can really do it.

How might a first-grade teacher provide for enough reading-aloud opportunities for her pupils? Might providing time when children can read aloud to one another in pairs be one way?

7. Visit a first-grade classroom in which a three-group reading system is in operation. You may see the Brownie group, consisting of the best readers, the Fairies, consisting of the average readers, and the Bluebirds, consisting of the slow readers. (Among themselves, the pupils may refer to this group as the "dumbbell group.") The teacher will hear one group read aloud to her in front of the room, while the other two groups busy themselves with work-books at their desks. Does such a system cut down the reading-aloud time of each child? Select one child for observation and note how much time out of the total reading period he spends in reading. What suggestions can you offer for increasing this time?

8. As children progress through the elementary school, reading becomes a very important tool for science, health, and the social studies. The reading program increasingly emphasizes the skills needed in work-type reading—using an index, locating information, skimming, noting relevancy of material, etc. Many basal-reading series use story-type material to teach these skills. That is, after children read the story of "The Courageous Dog," they are asked to answer questions as a check on their comprehension.

Are there dangers in such a procedure? Would having to answer questions about every story you read in The New Yorker or Ladies' Home Journal have any effect upon your attitude toward reading? When and with what kinds of materials would you suggest that comprehension skills be taught?

9. Mr. Lipton wants to encourage his class to do some creative writing, but he is not sure how to initiate such a project. Should he

a. use the section in the language workbook devoted to creative writing and have his pupils do the exercises outlined there?

b. set aside time in the daily program for writing, first stimulating pupil ideas by reading some choice selections of different kinds of compositions and then encouraging oral expression of ideas?

c. list interesting topics for written compositions on the board and have pupils select one of them to write about?

Analyze each of these suggestions in terms of probable effects upon pupil creativity.

10. When Mr. Lipton's class completes its efforts, he finds many mistakes in spelling and grammar. Mr. Lipton corrects each mistake carefully with a red pencil and then assigns his pupils the task of copying over their stories correctly.

Is this the most effective way of instilling correct writing habits in pupils? What better method would you suggest? Turn to the references by Dawson and Strickland for helpful suggestions.

11. Using the references listed in footnote 24, what stories might you as a third-grade teacher read to your class to build favorable attitudes toward Negroes? Catholics? Jews? Italians? the lower social class? other minority groups?

What kind of discussion of the story might be planned following the reading? What suggestions do you find in the Taba reference that are helpful?

Can you think of some stories involving minority groups that should not be read to young children because they perpetuate a stereotype of that group? Should a teacher read a story depicting a Negro child as a dialect-speaking, watermelon-loving, carefree "pickaninny"? Does the same answer apply to high-school students' study of The Merchant of Venice with its characterization of Shylock as a Jew? How might such stereotypes be dealt with by a teacher working with older pupils?

12. Miss Maxwell finds that, when she dictates spelling words in the final test on Friday, Martin gets an almost perfect score if she dictates the words in the order in which they appear in the book, but if she dictates the words out of order, he fails.

Remembering the four essentials of learning presented in Chapter 2, how would you analyze Martin's behavior?

What kind of help can Miss Maxwell give Martin that will help him to notice different and more helpful cues?

SELECTED READINGS

ABRAHAM, WILLARD, A New Look at Reading (Porter Sargent, 1956). Contains extensive information forms to be used in child study, reading, and other language arts.

ALSTETTER, MABEL, Adventuring with Books (National Council of Teachers of English, 1956). An annotated list of books for children in the elementary school.

AMERICAN LIBRARY ASSOCIATION, A Basic Book Collection for the Elementary Grades (6th ed., The Association, Chicago, 1956). An excellent list of books for different levels of the elementary school.

ANDERSSON, THEODORE, The Teaching of Foreign Languages in the Elementary School (D. C. Heath & Co., 1956). A guide for developing a foreign language program and for teaching foreign languages in the elementary school.

BAILEY, MATILDA, HORROCKS, EDNA M., and TORRESON, ESTHER, Language Learnings (American Book Co., 1956). Contains practical suggestions for language teaching in the kindergarten and grades one and two.

BOND, GUY L., and WAGNER, EVA BOND, Child Growth in Reading (Lyons and Carnahan, 1956). Describes a typical reading program and answers questions that teachers ask.

——, and TINKER, MILES A., The Diagnosis and Correction of Reading Difficulties (Appleton-Century-Crofts, 1956). Discusses the factors involved in diagnosing and correcting reading difficulties.

CALIFORNIA STATE DEPARTMENT OF EDUCATION, Teachers Guide to Education in Early Childhood (California State Printing Office, Sacramento, 1956). Chapters 11, 12, and 14 deal with speaking, reading, writing, and literature for young children.

——, Teachers Guide to Education in Later Childhood (California State Printing Office, Sacramento, 1957), Chapters 11 and 12 provide suggestions for teaching speaking, writing, listening, reading, and literature to children in the intermediate grades.

COMMISSION ON THE ENGLISH CURRICULUM, National Council of Teachers of English, Language Arts for Today's Children (Appleton-Century-Crofts, 1954). Excellent suggestions for teaching the language arts in elementary schools.

DURRELL, DONALD, Improving Reading Instruction (World Book Co., 1956). Deals with developmental and remedial reading.

HACKETT, ETHEL L., and HUGHES, DONALD H., Teaching Language Arts (The Ronald Press, 1956). Provides suggestions for setting up an effective language arts program for an elementary school.

HILDRETH, GERTRUDE, Teaching Spelling (Henry Holt & Co., 1955). Discusses principles of learning that apply to spelling, techniques of word study, and the use of spelling tests.

———, *Teaching Reading* (Henry Holt & Co., 1958). Gives a comprehensive discussion of reading in the elementary school, its processes, methods, instructional techniques, materials, and special problems.

HUNNICUTT, C. W., and IVERSON, WILLIAM J., *Research in the Three R's* (Harper & Brothers, 1958). Summarizes 78 key research studies dealing with elementary school subjects.

McKIM, MARGARET G., *Guiding Growth in Reading* (The Macmillan Co., 1955). Deals with the development of pre-reading skills, beginning reading, developing independent readers, intermediate grade reading, and remedial reading.

SHANE, HAROLD G., *Research Helps in Teaching the Language Arts* (Association for Supervision and Curriculum Development, National Education Association, 1955). Summarizes research relating to the language arts from 1924–1954.

SULLIVAN, HELEN BLAIR, and TOLMAN, LORRAINE E., *High Interest—Low Vocabulary Reading Materials* (Boston University, School of Education, December, 1956). Contains a list of over one thousand titles of easy reading materials for youngsters needing materials of more mature interest.

SELECTED FILMS

Alphabet in Teaching Word Recognition. A 24-minute sound film that shows a lesson as conducted by a first-grade teacher. Several activities are used to develop facility in recognizing words containing the short *a* sound, as in *ax*, in words by themselves and then in actual reading situations. Iowa State University.

Build Your Vocabulary. A 10-minute sound film showing a functional approach to vocabulary-building. Coronet Films.

Choosing Books to Read. An 11-minute sound film. Shows the value of books for different purposes, how interests are broadened through reading, and how the librarian can help in selecting books. Coronet Films.

Making Sense with Sentences. An 11-minute sound film showing why pupils should learn to make complete sentences, what a complete sentence is, and other factors involved in expressing thoughts. Coronet Films.

News Times in First Grade Reading. A 22-minute sound film showing a news lesson in the first grade. Illustrates how the news period is used as a phase of the reading program and applied to other instructional areas. Iowa State University.

Skippy and the Three R's. A 29-minute sound film giving an account of how children learn the three R's naturally and easily. Agra.

Spelling Is Easy. A 10-minute sound film showing five important steps in learning to spell a word correctly. Coronet Films.

The Carpet Under Every Classroom. A 20-minute sound film showing ways a good library program helps to realize the objectives of the school. The library is presented as a resource center for pupils and teachers. Precision Films.

They All Lean to Read. A 26-minute sound film showing how an experienced teacher provides effective reading instruction for her third-grade class: the class is divided into groups according to reading ability; each group is taught independently at its own level; individual help is provided; all groups cooperate on a project. International Films Bureau.

Why Can't Jimmy Read? A 15-minute sound film. The story of nine-year-old Jimmy and his reading problems as a typical case history from the Syracuse University Reading Clinic. Syracuse University.

☐ THE IDEA is frequently expressed that the future of civilization revolves around the question of whether man can learn to live with his fellow man. There is abundant evidence that the future of this nation depends not only upon our achievements in science but upon our knowledge and skill in the realm of human relations. A high degree of social competence is required in diplomacy, foreign trade, labor-management relations, intercultural relations, the conservation of natural and human resources, the reduction of crime and delinquency, the administration of public enterprises, and education.

Although no one expects children in the elementary school to provide solutions for complex national and international problems, almost everyone agrees that the elementary school has a responsibility for introducing the child to society and its problems. How far to go in the process, how to organize the program, and what methods and materials to use are central problems in curriculum planning.

The social-studies program in the elementary school cannot take sole responsibility for the social education of children, but it can play an important part in their social growth and provide them with insight into the structures and processes through which people live, work, and play together. It can help them to understand our economic system, our form

Living Together— The Social Studies

We as a nation are in desperate need of a citizenry possessing, in a measure as yet unattained, social literacy and a sense of social responsibility, who will be capable of grasping intelligently and then wrestling productively with the complex problems of our social order.
—RALPH C. PRESTON

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of government, the history of our nation, the differences and similarities of peoples around the world, the contributions that citizens make to the welfare of the community, and the rights and duties of citizens in a democracy. The content of the modern social-studies program is drawn from a wide variety of sources; organization and methods harmonize with what we know about learners and the learning process. Without losing sight of the value of acquiring useful information, the program helps each child to grow continuously in the abilities needed for effective participation in the life of a free society.[1]

The Meaning of Social Studies

The term *social studies* came into general use in comparatively recent years. The National Education Association gave it official sanction in 1916, and the teachers of social subjects selected the name *National Council for the Social Studies* for their new organization in 1921. The term is now generally used to designate that phase of the curriculum in elementary and high schools that deals with the relations of human beings to one another and to their environment.

The social studies and the social sciences both deal with human relationships, the former at the level of childhood and adolescence and the latter at the level of the adult. The social scientist is concerned primarily with expanding the boundaries of knowledge and with developing highly specialized scholars in such fields as history, geography, political science, economics, sociology, and anthropology. The social studies are concerned with the wide dissemination of information, the development of social skills, and the improvement of social behavior. The social-studies program draws materials from the various social sciences, but it also uses materials from the local community that cannot be properly classified as belonging exclusively to any of them. The social-studies program in the modern elementary school does not place major emphasis on the mastery of logically organized bodies of subject matter; it emphasizes the functional use of subject matter from many sources to increase social literacy and develop socially desirable behavior.

The improvement of social behavior as a concern of the social studies has been misinterpreted by some critics of education. They define social behavior rather narrowly in terms of social amenities—the "pleases" and the "thank-you's," sharing equipment, taking turns in a group discussion, and in general learning to act toward others in civilized fashion—and ridicule the school for making these part of the curriculum. But the social amenities are

[1] See Ernest O. Melby, "Improvement of Teaching in the Social Studies," in *Social Studies in the Elementary School* (National Society for the Study of Education, 1957), pp. 285–305.

only a small part of socially desirable behavior as defined by educators. Socially desirable behavior in a democracy would include many things such as exercising one's right to vote; seeing that constitutional rights as defined by the courts are accorded to all regardless of race, creed, or color; working for community improvement; working for better schools; jealously guarding our freedoms under the Bill of Rights; recognizing America's responsibilities toward other nations; recognizing that the future of America is inextricably bound up with that of other parts of the world. In its social-studies program the modern school attempts to teach pupils the concepts, skills, and attitudes that will lead to behaviors consistent with our democratic ideals.

In order to help children develop such desirable social behaviors the teacher does not necessarily plan a unit or a special activity. But these behaviors are goals the teacher continually has in mind when she teaches. Whether the study is centered on South America, Medieval Europe, a current events problem or a playground squabble, concepts stemming from our democratic faith are introduced, and generalizations that will guide children toward democratic behaviors are taught to them.

The term *social education* is frequently found in educational writing. The term is not used as a substitute for the social studies but as a general term to include all phases of the environment that influence the development of social maturity in children. It includes not only the social-studies program of the school but the work of other educative agencies, such as the home, the community, the press, radio, motion pictures, and television, which influence the social insight and behavior of children.

Social living, sometimes used to designate those phases of the school program in which the child participates in group activities, includes not only the organized social-studies program but also such activities as the core program, experience units, assembly programs, and school clubs.[2]

Objectives

The primary objective of the social-studies program in the modern elementary school is the improvement of group living, not merely in the classroom, but in the community, the nation, and the world. It is designed to develop intelligent, responsible, self-directing citizens. The school, therefore, not only provides opportunities for the child to acquire useful information relating to social problems; it also provides a laboratory for social living in

[2] See Robert Hill Lane, *The Teacher in the Modern Elementary School* (Houghton Mifflin Co., 1941), Chapter 5, "Social Living in the Classroom and Elsewhere"; and Henry Harap, *Social Living in the Curriculum* (Division of Surveys and Field Services, George Peabody College for Teachers, Nashville, Tenn., 1952).

which he has an opportunity to develop his own potentialities and contribute his maximum effort to the improvement of group living.

The formulation of objectives for the social-studies program is the responsibility of the staff of each elementary school. The staff will find it worth while to review the general objectives of education in a democracy, the principles of child growth and development, and the lists of objectives developed by educational organizations and other school systems. Each school staff, however, must shape the objectives to fit the local community.

Social-studies objectives are usually stated in terms of desirable behavior traits, useful information, and social attitudes. An examination of recent curriculum bulletins and books on the teaching of social studies reveals that the objectives listed below are among the most common:

1. The ability to participate effectively in group enterprises;
2. The ability to contribute to happy, successful home life;
3. An understanding of important economic, social, and political problems;
4. The ability to use basic social-studies skills such as finding, organizing, evaluating, and presenting information;
5. The willingness to act courageously in behalf of principles;
6. A belief that the welfare of the group is served better by the pooled thinking of many than by the decisions of a dominant few;
7. Respect for the rights and privileges of minorities and willingness to abide by the decisions of the majority;
8. Familiarity with dependable sources of information on social problems;
9. Ability to detect malicious propaganda;
10. Familiarity with technical vocabulary;
11. Sensitivity to social problems and conditions;
12. The habit of collecting and considering appropriate evidence before making decisions on social problems;
13. A respect for human personality without regard for race, color, class, or creed;
14. An understanding of the cultures of other people;
15. An understanding and appreciation of the United States and of the sacrifices that have been made for our democratic way of life;
16. An understanding of the interdependence of individuals and groups;
17. An understanding of the importance of natural resources and of effective conservation practices;
18. Respect for honest differences of opinion;
19. An appreciation of the social values of various occupations;
20. An intelligent loyalty to democratic principles and skill in the use of democratic processes.

Organizing the Program

The problem of developing the over-all framework or organization of learning experiences in the elementary school was discussed in Chapter 5. It was suggested there that many schools use the social studies as the core around which the unified program is organized.

The principal and his staff in an elementary school are confronted with the problem of developing the type of social-studies program which, in view of local conditions, will most effectively facilitate the achievement of the objectives of the school. The following basic principles should be useful in helping the staff develop a plan of organization:

1. The program should be based upon a cooperatively developed list of objectives.

2. The over-all framework of the program should be developed cooperatively by the school staff, parents, and resource persons who are specialists in the field.

3. The plan should afford the teacher the greatest possible freedom in selecting and developing, within the agreed-upon framework, learning experiences that meet the needs and interests of pupils in specific classroom situations.

4. The plan should facilitate the use of the local community as a laboratory for learning.

5. The scope of the program should be comprehensive and well balanced in terms of significant aspects of human relationships, and should provide for continuity of learning as the child grows and develops.

6. The plan should promote horizontal articulation; it should make it possible for the teacher to draw upon other curriculum areas, such as language arts, science, and the arts, for materials and activities.

7. The plan should promote vertical articulation; experiences in any grade should be related to what has already been studied and to what is to follow.

8. The plan should be flexible and subject to continuous revision in terms of new developments in education and changes in conditions of living.

Two general plans of organization are used by elementary schools: (1) the separate-subjects type, and (2) the unified program. In the separate-subjects type, the pupil attends one class in history, another in geography, and sometimes another in civics; frequently the classes are taught by different teachers. The unified program takes many forms, ranging all the way from a fusion of history, geography, and civics to an integrated type of program operating on the basis of problems and using materials not only from the social studies but from literature, art, music, science, and other curriculum areas.

The opinions of specialists, as well as current practice, seem to favor the unified program over the separate-subjects type of organization, at least in grades 1, 2, and 3. Fraser reports studies of existing patterns of organization as follows:

1. A study completed in 1953 showed that fusion and integrative types of organization were employed by 91 per cent of 113 city school systems in grades 1 and 2 and by 88 per cent of 118 city systems in grade 3.

2. The same study found that 41.73 per cent of the city school systems employed the separate-subjects type of organization in grade 6.

3. Data from this study and from similar studies involving teachers, state departments of education, and elementary supervisors, indicate that the social studies are taught in the primary grades through a fusion or integrative type of organization, that the separate-subjects type of organization is used to a greater extent in the intermediate grades, but that a majority of the schools employ some degree of fusion or integration in organizing the social-studies program for the intermediate grades.[3]

Planning the Sequence of Experiences

State, county, and city school systems prepare curriculum guides that present, along with other suggestions, a suggested scope and sequence for social-studies experiences. The scope and sequence chart is designed to prevent undue duplication, to provide proper balance in the program, and to assist in the selection of instructional materials.[4] Efforts are made to relate learning experiences to the maturity of children at various levels, to capitalize on conditions and resources of the community, and to promote the development of democratic behavior. The sequence of experiences usually moves from the child's immediate environment toward places, events, and people farther removed in time and space. Thus, home, school, and the local community are emphasized in the kindergarten and the first and second grades, other communities in the third grade, the state in the fourth grade, the United States in the fifth grade, and other countries in the sixth grade.

A number of recent studies have shown, however, that the development of a scope and sequence chart does not necessarily solve the problem of selecting appropriate learning experiences for the child. Children in the primary grades, for example, have been found to know a great deal already

[3] Dorothy M. Frazer, "The Organization of the Elementary-School Social-Studies Curriculum," in Social Studies in the Elementary School (National Society for the Study of Education, 1957), pp. 129–162.
[4] See Eleanor Merritt and Henry Harap, Trends in the Production of Curriculum Guides (George Peabody College for Teachers, 1955).

about the aspects of the community they are expected to study.[5] On the other hand, the state capital may be as far away as the Amazon in terms of the experience of the fourth-grade child. The influence of mass media of communication, vacation trips, and the mobility of population make it difficult to set up a hard-and-fast rule concerning what should be taught at various grade levels. However, these influences *are not sufficiently powerful to make it desirable to eliminate efforts to develop an over-all framework for the social-studies program.* Rather, they point to the need *for flexibility in implementing the over-all design; for careful study of a particular group of children in order to understand their previous experience, their out-of-school learning, and the material they have already studied; and for cooperative planning by the school staff to prevent undue duplication and to foster readiness for information and skills that come later in the child's experience.* Some schools organize the social-studies program in such a manner as to include a *combination of specific-purpose activities,* such as carrying out a drive for the Junior Red Cross; a *center of interest* such as transportation, communication, or housing; and the *study of a topic* in an organized fashion.[6] The crucial factor is not the articulation of bits of content as such; rather, it is the articulation of content with children's experience. The scope and sequence chart does not guarantee continuity in the learning experiences of children; rather, it makes it easier for the teacher to create such continuity.

A sample program

The Social Studies Committee of Santa Clara County, Calif., under the guidance of L. F. Gordon, General Supervisor, recently developed a *Teacher Guide for Social Studies in the Elementary Schools of Santa Clara County.*[7] The sequence of units is as follows:

Grade One:	Our School
	The Home
	The Neighborhood
Grade Two:	Life in a City Community
	Life on a Farm
Grade Three:	Life in a Modern Community
	Life in a Contrasting Primitive Community: Pueblo Indians

[5] John D. McAulay, "What's Wrong with the Social Studies," *Social Education,* December 1952, pp. 377–78.
[6] See *Opening Doors: A Social Studies Bulletin* (Wilmington Public Schools, Wilmington, Del., 1954), pp. 15–16.
[7] *Teacher Guide for Social Studies in the Elementary Schools of Santa Clara County* (San Jose, Calif., 1951).

Grade Four: Early California
Mexico, Our Good Neighbor

Grade Five: Period of Discovery
The Colonial Period
The Westward Movement and Pioneer Life
California Today

Grade Six: Our Latin-American Neighbors
Alaska
Canada
Aeronautics
Communication
Islands of the Pacific

Grade Seven: England and the British Empire
France, Italy, Germany and the U.S.S.R.
The Scandinavian Countries
Africa and Asia Minor
Asia

Grade Eight: The Growth of Democracy
1. What ancient peoples contributed to the growth of democracy?
2. What great documents have contributed to the growth of democracy?
3. What meetings and events have contributed to the growth of democracy?
4. What events led to the formation of our type of government?
5. What are the parts of the Constitution?
6. How has political freedom developed?
7. How has economic freedom developed?
8. How has social freedom developed?

Effective Teaching Procedures

Formulating objectives, developing an over-all framework or organization, and planning the sequence of learning experiences are some of the means by which the staff of an elementary school can provide a favorable situation for teaching the social studies. The quality of the program is determined, in the final analysis, by the procedures used to make the social studies functional and meaningful for children.

The social studies offer many opportunities for rich and meaningful experiences. The extent to which these opportunities are utilized depends to some extent upon the size of the classroom, the type of furniture in the

room, the amount and kind of instructional material available, and the type of curriculum organization used in the school. It depends to a much greater extent upon the vision of the teacher, her understanding of the characteristics and needs of children, and her resourcefulness in adapting methods and materials to the needs of individuals.

Curriculum planning in the social studies no longer consists merely of the selection of content to be covered. The unit on "Latin-American Neighbors," for example, listed for the sixth grade in the Santa Clara County program, suggests content to be studied, such as deserts, mountains, rivers, lakes, groups of people, modes of transportation, education, occupations, and products, but it contains a great deal more than an outline of content to be covered. Various approaches for stimulating interest in the unit are described; several pages are devoted to suggested activities involving the language arts, health, history, geography, science, construction, art, and music and rhythms; suggestions for evaluating pupil progress are given; and lists of films, film strips, still pictures, books, and periodicals related to the unit are provided.

If elementary-school children regard the social studies as dull and uninteresting, the cause can usually be found in one or more of the following conditions:

1. The children are studying history or geography as separate subjects based on a single textbook. For example, one teacher of a fourth-grade group reported that the children had no interest in the social studies. It was found that the program consisted entirely of reading and reciting from a book about far distant lands.

2. The material in the book is too difficult for the children to understand and deals with concepts, places, and events far removed from their past experiences.

3. The children are forced to memorize isolated facts rather than engage in activities that are meaningful at their level of development.

4. The teacher conceives her task to be merely that of passing along information rather than increasing social literacy, and improving social behavior.

Major characteristics of effective teaching procedures

There is no simple formula for effective teaching of the social studies in elementary schools. The teacher who understands the principles of child growth and development, the realities and ideals of contemporary American life, and the broader objectives of the elementary school has the foundation upon which to develop teaching procedures adapted to the situation in which

Learning About the Community

A study of the local community is an important part of the social-studies curriculum for most second- and third-graders. All too typically, however, the pattern has been one of studying "community helpers"—the policeman, the fireman, the milkman, and others—in the second grade, and of going back in history with a study of Indians in the third. This kind of curriculum pattern has been under fire for many reasons. Too often units of work have presented an unrealistic picture of certain service occupations and have neglected to give pupils a well-rounded picture of the functioning of a community. Indian units have included much erroneous content about Indian life—that all Indians lived in tepees, for example, or that all Indians had the same habits, values, and ways of living.

A more fruitful approach to community study might begin with a study of the school district as a unit. Pupils can find out what businesses and what occupational groups are represented in the district, how local government impinges upon this district, how the area is supplied with water, electricity, and other utilities, what procedures the residents on a specific street have to follow in order to have their streets repaired, and so forth.

Some school systems are discovering that certain aspects of community study can more profitably be undertaken by older children. Here a fifth-grade teacher is directing a unit in economic education. Pupils have learned what taxes are collected on the local and state levels and how the tax money is spent. Community studies, however, should not stop with describing existing conditions; pupils should also find out through their reading or through interviews with knowledgeable citizens what is wrong with the present tax structure and how it might be improved. Educated in this fashion, they will be more intelligent citizens when they vote on school referendums and tax reforms in adult life. © (Photo: Merrim, from Monkmeyer Press Photo Service)

Education for International Understanding

One of the most important facets of the social studies curriculum in today's schools is education for international understanding. The several Pan-American conferences of the 1920's and 1930's strongly advocated a cultural approach to the study of Latin-American countries in the hope of dispelling the prejudices and stereotypes held by many United States citizens Today the cultural approach extends to studies of countries in many parts of the world. In addition to teaching pupils the history and geography of these countries, teachers also include a study of the life and customs of the people. The emphasis is not upon how queer and amusingly quaint they are, but on the fact that people everywhere face common problems of living and have learned solutions to them that are different but not necessarily either inferior or superior.

Unfortunately, the study of life and customs of the people has in some cases been carried to extremes. Children spend more time learning what the Arab peoples eat, how they dress and what kind of homes they live in, for example, than on the rise and significance of Arab nationalism, and the economic problems facing the Arab peoples. Also, countries have been selected for study to illustrate man's adjustment to various climatic conditions, with the result that a disproportionate amount of time has been spent on the Netherlands, Switzerland, Norway, and the Belgian Congo. The modern American child often knows more about the Eskimoes than he does about the Russian Reds, or the peoples of other great world powers. Fortunately, reading materials on these countries suitable for elementary-school children are beginning to appear so that the older curriculum pattern can be changed.

The study of other countries has been greatly enriched by the kinds of activities that teachers plan in addition to reading. This picture shows a parent of Hungarian origin who has come to the classroom to answer children's questions and to show various objects from her native land. Films, photos, and other visual materials also aid in clarifying concepts acquired through reading. Sometimes exhibits can be arranged in the classroom or trips can be taken to see exhibits in the community. Maps that illustrate physical features, political divisions, products, and regional characteristics further help to fix the learnings emphasized in the unit.

© (Photo. courtesy of the University School, Ohio State University)

she is teaching. These bases of good teaching have been discussed in Chapters 2, 3, and 4. Chapter 6 contains suggestions for developing teaching procedures in harmony with them.[8] The following list, though by no means inclusive, will call attention to some of the major characteristics of effective teaching in the area of the social studies:

CHILDREN PARTICIPATE IN MANY MEANINGFUL ACTIVITIES. Reading the textbook and reciting the contents to the teacher once constituted virtually the only experience the child had in the social-studies program. In recent years, however, the number and variety of learning activities have increased greatly. It is assumed that if children are to become more effective in meeting social situations they must participate in many meaningful activities involving human relationships. Merely reading about various methods of voting is not enough; voting must become functional in the lives of children if they are to become intelligent citizens. Democratic citizenship develops in a classroom in which children practice living as citizens of a democracy.

It is recognized, of course, that the activity program can be carried to undesirable extremes. Activities are not ends in themselves; they are means to learning, just as subject matter is a means to learning. It should not be assumed that just any activity has educational value. Teachers spend a great deal of time in selecting and guiding activities so that they will contribute to the development of useful concepts, attitudes, and behavior traits. Unless this is done, the activity program can be much worse than the traditional program based on a single textbook. In fact, one of the pitfalls that the modern teacher must avoid is activity for activity's sake. Teachers have sponsored activities of little or no real educational value and have justified them "because the children are so interested" or because "they provide such wonderful opportunities for working in groups."

Here are samples of activities carried on at different grade levels in elementary schools:

Fourth grade. Children model an Eskimo village on the sand table. They make pipestem figures dressed as Eskimos, build igloos, arrange dog sleds and other equipment.

Sixth grade. Children stage an original play, "The Trial of Peter Zenger," growing out of their study of our basic freedoms. They write the script after studying various records of the trial, plan the scenery and the costumes, and plan other aspects of the production.

Third grade. The community health officer comes to school by invitation to talk to the class about the various ways in which his office safeguards

[8] A number of excellent books deal exclusively with the teaching of social studies. See, particularly, the following references, which are cited at the end of this chapter: John U. Michaelis, *Social Studies for Children in a Democracy;* Ralph C. Preston, *Teaching Social Studies in the Elementary School;* Edgar Bruce Wesley and Mary A. Adams, *Teaching Social Studies in the Elementary School.*

the health of the community. The class plans for his visit, writes him a letter of invitation and a thank-you letter. No posters are made; no art work is involved.

Second grade. Children build a little post office for the distribution of valentines. They bring in boxes to form a counter and build a stamp window. They cover the boxes with brown paper, paint a background and even erect a roof. They plan and carry out the whole activity in committees. Each child has a box in the post office marked with his name. The children take turns playing clerk and putting the valentines in the proper place.

First grade. The children put on a health play for their parents, taken from a magazine for teachers. They memorize their lines, make little costumes out of brown wrapping paper, and learn a song entitled "Making Our Teeth White and Strong." The hero of the play is Mr. Tooth Brush, who finally drives old Mr. Cavity right off the stage in a hilarious climax.

A critical analysis of the above activities will enable the reader to develop some criteria for evaluating activities. The Eskimo activity has little, if any, educational value. The children are carrying on an activity based upon factual information that is out of date; the modern Eskimo no longer lives the kind of primitive life the children are picturing. Furthermore, since the pupils do not have actual materials available, the makeshift igloos, sleds, and costumes will bear little relationship to reality and may actually create erroneous concepts in the children's minds. Activities that truly reproduce the experience of another time or place (such as candle-making in a pioneer unit) will help the child better understand other ways of living, but imitations of reality, and too often imitations based upon erroneous information, are a waste of teacher and pupil time.

The post office activity could be criticized on the same grounds. Actually it bears little relationship to what goes on in a real post office. But an additional criticism could be made, namely, that a good deal of pupil time is spent on construction work of a dubious nature. Activities ought to help children acquire concepts; presumably the post office unit was planned to help children acquire concepts relating to the functioning of our postal system. But rigging up a "building" with cardboard cartons and brown paper does not help children acquire the desired concepts, and time spent on such an activity can hardly be justified.

Putting on a health play for parents can be a very worth-while educational activity. But there are a number of criticisms that can be made of the first-grade activity described above. In the first place, there is little to be gained from having children memorize a play written by someone else; when they create their own, they must use the concepts they have acquired, thus providing for review and also a check for the teacher on the accuracy of the children's information. In the second place, songs about the teeth probably

belong in the same category as singing commercials; teeth, toothpaste, soap, and tobacco are not the kinds of subjects that normally inspire one to song. In the third place, the study of health is really a *scientific* subject of inquiry, and the scientist frowns upon anthropomorphisms. Referring to the tooth-brush and cavity as if they had human qualities detracts from the scientific aspects of tooth care. And, actually, it perpetuates a misconception. Brush-ing the teeth does not *rid* the teeth of cavities; it helps to prevent their formation.

Assuming that the children have been adequately prepared, an activity involving a visit from the health officer can add considerably to the third grade's knowledge of what must be done to protect community health. If the children are well motivated there is no need to add sugar-coating in the form of posters or pictures. When the children are involved in solving prob-lems that are real to them, such sugar-coating only detracts from more pur-poseful activities.

The sixth-grade children in their play production are involved in an activity that is both creative and informative. They are having an opportunity to do research on an important topic and, in so doing, to further their knowl-edge of one of our basic freedoms—freedom of the press. The writing and staging of the play are highly creative activities, which also give them a chance to use what they have learned in their reading. Provided the children are held to high standards of accuracy in content and in staging, and that the product is the children's, not the teacher's, this activity can stimulate intel-lectual and creative growth.

Curriculum guides developed by groups of teachers in recent years con-tain many suggestions for appropriate social-studies activities. The following activities, for example, are typical of those found in units on transportation:

1. Learning how people and goods are transported by land:
   a. Discussing transportation by passenger trains, freight trains, automo-biles, trucks, busses, and trolleys;
   b. Taking a trip on a train;
   c. Visiting a railroad station;
   d. Showing the film *Passenger Train*;
   e. Dramatizing the work of the engineer, conductor, and porter;
   f. Drawing pictures of trains, automobiles, and busses;
   g. Writing stories about the parts of a passenger train: pullman, chair car, observation car, diner, kitchen, baggage car, and mail car;
   h. Drawing, painting, and modeling trains, automobiles, trucks, and busses;
   i. Developing songs, poems, and plays about trains, trucks, automobiles, etc.;
   j. Making a frieze depicting the development of transportation;
   k. Compiling a scrapbook of pictures of trains, automobiles, trucks, etc.;
   l. Drawing maps tracing some railroad routes;

m. Computing the cost of a trip by train, automobile, and bus;
n. Finding out what devices are used to make tram travel safe and comfortable;
o. Reading books on transportation;

2. Learning how people and goods are transported by water:
   a. Reading about steamships, ocean liners, pilot boats, canoes, police boats, etc.;
   b. Discussing the importance of water transportation;
   c. Finding out what devices are used to make water transportation safe and comfortable;
   d. Collecting pictures of modern ships;
   e. Drawing, painting, and modeling boats;
   f. Creating stones, poems, and songs about boats;
   g. Collecting travel folders, and pamphlets, and timetables;
   h. Computing the cost of a boat trip;
   i. Reading about navigation instruments;
   j. Relating experiences on a boat trip;
   k. Showing films of modern ships;

3. Learning how people and goods are transported by air:
   a. Discussing the types of air ships such as balloons, airplanes, seaplanes, helicopter, etc.;
   b. Discussing the importance of air transportation;
   c. Learning what types of work people do on airplanes;
   d. Finding out what devices are used to make air travel safe and comfortable;
   e. Comparing the cost of air travel with that of train or bus travel;
   f. Experimenting with air pressure;
   g. Drawing, painting, and modeling airplanes;
   h. Taking a short trip by airplane;
   i. Visiting an airport to notice types of planes, safety controls, etc.;
   j. Showing films on aviation;
   k. Learning how the airplane has changed the map of the world;
   l. Studying the economic social and military influence of air transportation;
   m. Finding out for which activities, other than travel, planes are used: delivering mail, rescuing people, rushing food and medicine to people in distress, spraying orchards and fields, advertising, patrol duty, etc.;
   n. Making lists of words relating to airplanes;
   o. Writing descriptions of the different parts of an airplane, such as the cockpit, cabin, kitchenette, etc.;
   p. Dramatizing the work of people on airplanes;
   q. Tracing some airplane routes.

MANY TYPES OF INSTRUCTIONAL MATERIALS ARE USED. Since the emphasis of the modern social-studies program is on living and understanding life in the world today, instructional materials include people, institutions, objects, and events as well as books and other verbal materials. Experiences with the actual social processes that make up group life in the total culture are to be

found in the modern classroom, but the media for learning are not confined entirely to those available in the school. In contrast to the limited opportunity for learning provided by a single textbook, the child learns from many interesting books; from maps, charts, globes, and models; from using tools and art media; from visiting places in the local environment; and from audiovisual resources such as motion pictures, film strips, radio, and television.

Books nevertheless constitute an important source of learning in the social studies. Modern textbooks encourage the development of meaningful concepts by providing a less crowded page, by using larger and better pictures, and by gearing the content and illustrations to the maturity level of the child. In addition to textbooks, many interesting books, pamphlets, and periodicals of various levels of difficulty play a part in the social-studies program.

The unit procedures used in most elementary schools require a classroom library supplied with a wide variety of materials that pupils may use to investigate and attack their individual and group problems. A children's encyclopedia; several different social-studies readers in sets of six or eight; children's books presenting pertinent factual materials; a set of the ninety Little Wonder Books; and similar sets of books that can be purchased at low costs, exemplify instructional materials needed in the modern social-studies program.[9] Pictures, charts, maps, pamphlets, and samples of products can be obtained from many large commercial organizations if state laws and local school regulations permit the use of such materials.[10] In some school systems, curriculum materials are prepared by local teachers. In Kansas City, Mo., two teachers were released from classroom duties for a period of time to prepare materials entitled *The Story of Kansas City*, to be used in the several levels of the school system.

Many elementary schools have their own motion-picture projector; others borrow a machine from the office of the county superintendent. Films can usually be obtained from the visual-education department of the state university, from the office of the state superintendent, or from the state health department.

In most communities, many valuable instructional materials and resources are available at little or no cost. In one school system, the teachers made a survey of all of the possible places that might be visited by classes. In other communities, children visit a session of court to observe procedures used in a trial; visit the office of the mayor, the police department, and the

[9] Social Studies Readers are published as a part of the *Curriculum Foundation Program* by Scott, Foresman & Co. The Little Wonder Books are published by Charles E. Merrill Co. For other suggestions see *Children's Books for 85¢ or Less*, Association for Childhood Education International.

[10] See J. G. Fowlkes, *Elementary Teacher's Guide to Free Curriculum Materials* (Educators Progress Service).

fire department; and make surveys, with the help of the health department, of the causes and prevention of communicable diseases. Residents who have visited other countries are invited to talk to the class; local industries and occupations are studied; and children participate in community-improvement programs.

CHILDREN LEARN TO ASSUME RESPONSIBILITY. The need for children to learn to assume responsibility as rapidly as possible has been recognized for many years. The work of the classroom, as well as the problems of group living that children face daily in the school, provides many opportunities for children to plan, assume responsibility, and work together. Among the numerous opportunities for worth-while socializing experiences are the following:

Developing objectives of a unit of work;

Selecting committees for various phases of the unit;

Planning activities, such as trips and work periods;

Developing procedures for effective group work;

Taking care of equipment such as tools, paint brushes, and playground equipment;

Making the classroom more attractive;

Making a school flower garden;

Serving as librarian;

Participating in community drives;

Planning and arranging bulletin boards;

Making plans for improving the school lunchroom;

Raising and lowering the school flag;

Planning and conducting assembly programs;

Caring for plants and animals in the classroom;

Supervising the parking of bicycles;

Developing a safety code;

Evaluating behavior and seeking to improve it.

The unit of work provides many opportunities for individuals and groups to assume responsibilities and develop leadership abilities. The pupils have a part in deciding what they shall learn and in planning their work. They have a wide variety of lifelike experiences, find many outlets for self-expression, and participate in the evaluation of progress towards the objectives they have set up.

EVALUATION OF PUPIL PROGRESS IS COMPREHENSIVE, CONTINUOUS, AND COOPERATIVE. For effective direction of the social-studies program, for accomplishing the goals of the program, and for discharging the responsibilities of the school to the community, an adequate program of evaluation is neces-

sary. Evaluation of pupil progress consists in determining what is happening to boys and girls as a result of social-studies experiences.

Many teachers consider evaluation to be synonymous with written examinations. From this point of view, pupil progress in the social studies can be evaluated merely by means of written tests. These examinations are useful in measuring the amount of information pupils have acquired and for revealing certain verbal reactions of pupils, but the social-studies program is not concerned with verbal reactions alone. As a result of social-studies experiences, the pupil is expected to develop interests in social events, habits of working cooperatively with others, attitudes favorable to social improvement, habits of critical thinking, and a command of useful information and skills. The program of evaluation is inadequate if it does not provide evidence of pupil progress in each of these aspects of growth. Some of the means by which this can be done are discussed in Chapter 14.

An adequate program of evaluation is carried on as a continuous process rather than being limited to specific periods just before report cards are given out. Evaluation is an integral part of the teaching-learning process rather than something that takes place after teaching has been completed.

Since there can be no evaluation until the objectives have been clearly defined, the first prerequisite in developing a program of continuous evaluation of pupil progress is a clear understanding of the major objectives of the social studies. For example, if the teacher understands clearly that one of the major objectives is to help the child develop responsibility, she is in a position to look for such specific evidence as the following:

Does the child participate in the selection of problems?
Does he stay with a task until it is finished?
Does he work well with others?
Does he follow group plans and decisions?
Does he help others when they need help?
Does he seek help when he needs it?
Is he resourceful in finding and organizing information?
Does he take his share of the responsibility for care of the room and the proper care of materials?

An adequate program of evaluation is carried on as a cooperative enterprise. Parents, teachers, and pupils are all concerned with the development of objectives, the planning of activities, and the selection of appropriate instruments and procedures for evaluating progress. Parents need to understand clearly what the program is intended to do for children; teachers need to provide leadership and expert knowledge and skill; and pupils need to participate actively in the program in order to become intelligent, self-directing citizens. School administrators and supervisors need to cooperate

Name_____   Date_____

School_____   City_____

WORKING WELL WITH OTHERS

How do you work with other students in making plans, discussing problems, making things, looking up ideas, and using materials? All of us need to check ourselves to see if we are doing those things that improve the work of the group. By checking ourselves, we can learn things to do to improve group work. Each person needs to know his good points and shortcomings and consider things to do to improve himself. Read the statements below and place a check in the square that tells how often you do each item in the list.

How often do you do each item listed below?	Always	Usually	Sometimes	Never	?
1. I stick to the job until it is finished.					
2. I take part in many different activities.					
3. I work with everyone in the class.					
4. I am eager to try out new ideas and to work on new problems.					
5. I share materials with others.					
6. I help set up plans and directions and follow them.					
7. I work happily without grumbling or losing my temper.					
8. I give in if my ideas conflict with the best interests of the group.					
9. I consider the rights of others.					
10. I am courteous and use good manners.					

with the program in order to give it direction and balance and to supply the necessary equipment and materials.

The school has the responsibility for developing in the child both the desire and the ability to apply standards of excellence to his own performance. If he must always look to the teacher to apply these standards, he is not likely to develop those qualities of initiative and self-analysis that are essential in a democratic society.

Devices and procedures for helping pupils evaluate their own progress are explained in detail in several of the references listed at the end of this chapter.[11] The accompanying check list, developed by John U. Michaelis,[12] illustrates the type of instrument that may be developed by teachers and pupils in terms of the specific needs of the group.

The broad objectives of the social-studies program require the use of a great variety of devices and procedures for evaluating progress. Both standardized and teacher-made tests have long been used to measure the acquisition of knowledge and skills in the social studies, but the devices for evaluating progress toward other objectives of the program are not so well known or so widely used.

Some of the newer devices for evaluating pupil progress in terms of the broader objectives of the modern elementary school are discussed in Chapter 14. Detailed descriptions of newer techniques used in evaluation are available in so many books on evaluation and measurement and on teaching the social studies that extensive treatment of them here would be needless repetition. Michaelis[12] lists the following devices, which are used in many school systems:

Directed observation	Logs	Case studies
Informal observation	Diaries	Activity records
Group discussion	Autobiographies	Recordings
Small-group interview	Scrapbooks	Photographs
Individual interview	Collections	Movies
Case conference	Samples of work	Stenographic reports
Rating scales	Teacher-made tests	Cumulative records
Inventories	Group-made tests	Pupil graphs
Questionnaires	Standardized tests	Profiles
Charts	Sociometric tests	Sociograms
Evaluative criteria	Anecdotal records	Flow-of-discussion
Checklists	Behavior journals	charts

[11] See also Association for Supervision and Curriculum Development, *Toward Better Teaching*, Chapter 8, "Helping Pupils Evaluate Learning" (The Association, 1949).

[12] *Social Studies for Children in a Democracy* (2nd ed., Prentice-Hall Inc., 1956), p. 410. Reprinted by permission of the publisher.

[13] John U. Michaelis, "Current Practices in City School Systems," *Educational and Psychological Measurement*, 9, 15–22, Spring, 1949.

The Use of Current Social Problems

The social-studies program is being influenced to an increasing extent by the daily problems of living in our culture. Education for family living, conservation education, community study, intercultural education, and aviation education are only a few of the newer emphases in the social-studies program brought about by the desire to gear the school program to the realities of the culture. Curriculum-planning groups have been taking the position that opportunities to understand these problems should be provided in the early years of the elementary school and should be continued throughout the child's school life.

Social-studies programs almost universally make provisions for studying home life in the primary grades. Typical problems and activities include getting along with members of the family, enjoying family life, sharing home responsibilities, getting along with other children, keeping well, playing safely, finding satisfaction in work done at home, conducting relationships with adult acquaintances and strangers, reading books about homes and families, and developing interests and hobbies that carry over to the home.

Education for family life

The first school was the home, and the first teacher was the mother. As the state has assumed more responsibility for the education of children, the gap between the home and the school has widened. In recent years such movements as parent-teacher associations and child-study programs have caused educators to plan school activities with the values and needs of home life in mind and have led teachers and parents to become partners in curriculum-making. Educators and laymen alike are realizing that strengthening family life will help solve many economic and social problems and provide a better basis for national defense against unsound ideologies.

A number of books published in comparatively recent years deal exclusively with family-life education—the need for it, the educational principles and practices used, and the specific school activities relating to the problem.[14] Worthy home membership was one of the "seven cardinal principles" of education published by the commission of the National Education Association in 1918, and the 1938 list of purposes of education published by the Educational Policies Commission included appreciation of the home, conservation of the home, homemaking, and democracy in the home.[15]

[14] See Bess Goodykoontz and Beulah I. Coon, *Family Living and Our Schools* (Appleton-Century-Crofts, 1941); and American Association of School Administrators, *Education for Family Life* (National Education Association, 1941).
[15] Educational Policies Commission, *The Purposes of Education in American Democracy* (National Education Association, 1938).

Education for "worthy home membership" begins in the kindergarten or first grade. To see how this purpose of education is translated into action, we turn to some generalizations growing out of a study of home and family life, planned for the primary grades.

Generalizations growing out of a study of home and family life[16]

1. *The composition of a family group differs from household to household.*

Teacher A in Grosvenor School began work in the area of home and family life with a group discussion, remarking on the pictures the children had drawn, which were now hanging in the room and which illustrated various members of their households. She commented on the fact that their families differed in many ways and asked the children to find some of the differences in the pictures.

DAVE: Tony's grandfather lives with him.
SANDRA: My uncles live with me.
TOM: Patsy's mother's dead and she has a grandmother.
POSIE: I got six brothers and sisters and Martha don't have none.

Other differences were mentioned, and in each case the teacher, by her matter-of-fact way of handling differences, helped children to accept various types of family membership. The group had previously agreed that the pictures they had drawn would become part of a class book on family life. To sum up the discussion, the teacher asked the children what they might say in the book to explain the pictures. The children finally agreed on the following text.

> Our families are all different.
> Some families are big and some are little.
> Some families have fathers and mothers and some just one and some none.
> Some families have different relations living with them.
> We have all got someone to take care of us.

2. *The composition of a family group does not necessarily determine the happiness of the family.*

Teacher A was not content to let the discussion rest with recognition of differences in family composition. She went on to pose the far more difficult question with her first graders, "Which kind of family is best?" The children answered with the characteristic braggadocio of six-year-olds, "Mine! Mine's

[16] From *Intergroup Education in Kindergarten and Primary Grades*, by Celia Burns Stendler and William E. Martin. Reprinted by permission of The Macmillan Company.

best." Then the teacher encouraged each child to tell the things he liked best about members of his family. From there the group was prompted to discuss the things they did not like, and the discussion was summarized in the children's language, "Who lives with you doesn't matter so much. It's what they're like."

Miss A did not want to give her children the impression that being from a broken home, being an only child, or having to share cramped quarters with too many relatives was the most desirable pattern of family living. But what she hoped to accomplish was to help her children see that differences in composition of families do exist, that these differences must be faced by children from families that are different as well as families that are more "normal" for our culture, and that these differences need not jeopardize the happiness of family members if they are accepted and dealt with intelligently.

3. *The kinds of houses people live in vary considerably; some are very comfortable houses and some are very poor, even dangerous to live in. People cannot always live in the kind of house they prefer.*

This generalization is especially needed in schools attended by children from difference social classes. By first grade, children in such schools are conscious of differences in housing and, unless they are taught differently, tend to associate poor living conditions with "badness." Thus, the person who lives in a "shacky" house (as they call it) is also a person who does not do the things that are "right."

The teacher may find that the opportunity to teach this generalization comes about in connection with other learnings. Miss X, for example, took her class on a trip to see a new housing project under construction. On the way, the bus passed through the Negro section of town. The children asked, "Why are all the people black?" "Why are the houses so shacky?"

Back in the classroom, the teacher brought up these same questions, and an interesting discussion followed. During it, the teacher brought out the following points:

The people we saw were colored, but not black. We call them colored or Negro people. It is only in things like their skin color and hair that they are different from you. Some white people do not know this. They think Negroes are not as good as whites because they look different from whites. They pass laws which make Negroes live in only one part of town.

Most of the houses in which the Negroes live are owned by white people.

Some white people are trying to make better laws for the Negroes. In some housing projects whites and Negroes live together. (She shows pictures.)

We cannot judge people by the kind of houses in which they live.

Because of the housing shortage, people live in many makeshift houses, including trailers.

4. Patterns of family living vary considerably from family to family.

This very broad generalization can be developed to include who works in the family, what kinds of work they do, the different churches they attend, the rules and regulations they set up for family members, and the customs within each family. As with the other generalizations, the teacher begins first with a statement acknowledging differences in the group. She may start in this fashion:

"We've been finding out many ways in which families are alike and many ways in which they are different. They may differ, too, in who works in the family and in the kind of work they do. Let's see if we can find out what some of these differences are."

The area of work gives the teacher a very good opportunity to help children see that both fathers and mothers can work outside the home, that many, many different kinds of jobs are necessary in our modern world, and that some jobs require special competence and special training. She may also use this opportunity to help children become acquainted with different kinds of workers. One first-grade class undertook to find out how many different kinds of workmen it took to build a house. In the course of their study, they invited an electrician, a bricklayer, an architect, and a plastering contractor to the classroom to talk about their jobs. Because the plastering contractor was a Negro, the children had the experience of getting to know a worker from a different race as well.

In the area of work, the teacher will experience greater difficulty in finding stories that are true to real life. Too many of the readers include glamorous descriptions of the milkman and the fireman which give young children an erroneous impression of these occupations. Too few readers include the industrialized worker, the miner, the unskilled laborer, and the social-service worker. Teachers may want to supplement this thin fare by having children make their own picture books of work done by their parents or of work necessary to a specific enterprise, such as running a school or building a house. As children arrive at generalizations from their class discussions, they can dictate these to the teacher to form the text of their book.

Conservation education

The responsibility of the public school for helping to check the exploitation of the nation's natural resources illustrates the theme that has been emphasized throughout this book—that problems of living with which our people are confronted must be taken into account in curriculum-planning.

The need for conservation of natural resources was discussed in Chapter 3. It was pointed out there that the public school has an important role in providing information, attitudes, and habits that will make conservation a way of living.

The effort to use the powers of the federal government to conserve our natural resources began in earnest during the administration of Theodore Roosevelt and has continued to the present. During the last two decades many state legislatures have enacted laws requiring that conservation be taught in the elementary schools; curriculum bulletins have contained suggestions for including conservation materials in the science program and in the social studies; and state, national, and private organizations interested in the problem have published descriptions of what schools in the various sections of the country are doing.[17]

Units on conservation of the soil, forests, minerals, wildlife, water, and human resources are found both in our science and the social-studies parts of many elementary-school programs. Emphasis on conservation is found in other units relating to the home, the school, the community, the state, and the nation.

ILLUSTRATIVE ACTIVITIES USED IN TEACHING CONSERVATION

Conservation of Soil

Taking excursions to see how soil is blown by wind and washed by water;

Planting seeds and observing how plants hold the soil;

Showing films, such as *Rain on the Plains*, *Soil and Life*, and *Soil Conservation*;

Clipping articles from newspapers and magazines on soil conservation;

Making piles of soil in the schoolyard and observing how they are washed away by rain;

Covering piles of soil with lawn clippings and observing how these lessen washing;

Making collections of different types of soil and observing the differences in color and texture between rich soil and poor soil;

Observing lawns to see what happens to soil where paths are made;

Consulting farmers to find out how the soil is conserved and renewed;

Finding out what local, state, and federal agencies help in soil conservation;

Learning about the cost of erosion in terms of farms lost, homes destroyed, and the reduced prosperity of cities.

[17] See the following references: *Conservation Education in Oklahoma Schools* (State Department of Education, Oklahoma City, Okla., 1945); *Teaching Conservation in Elementary Schools* (Federal Security Agency, United States Office of Education, 1938); *Large Was Our Bounty* (Association for Supervision and Curriculum Development, 1948).

Conservation of Forests

Taking field trips to collect and identify leaves;
Drawing leaf prints;
Learning to identify trees in the community;
Planting trees;
Making booklets illustrating the work of the forest ranger;
Making conservation posters;
Drawing pictures of trees studied;
Finding out how rapidly forests are being depleted;
Studying the use of products from forests;
Making booklets about national parks and forests;
Learning songs and poems about trees.

Conservation of Mineral Resources

Learning how the nation's coal and iron can be conserved;
Collecting publications that deal with uses made of petroleum;
Locating the principal oil fields in the nation;
Learning what coal is used for;
Making a survey of the uses of iron in the home and community;
Collecting scrap iron;
Writing articles about the conservation of minerals.

Conservation of Wildlife

Collecting pictures of birds;
Learning to identify different types of birds, such as game birds, song
    birds, and predatory birds;
Taking a field trip to identify birds;
Finding out where birds live, what they eat, and how they raise their
    young;
Making birdhouses and birdbaths;
Learning poems and songs about birds;
Drawing pictures of different types of birds;
Listening to phonograph recordings of bird songs and calls;
Learning to identify different kinds of fish;
Taking a trip to a fish hatchery;
Collecting pictures of fish;
Building an aquarium;
Learning poems and songs about fish and fishing;
Finding out what is being done to preserve the supply of fish;
Learning the legal ways of catching fish.

Conservation of Water

Locating the principal rivers in the state;
Finding out how water resources influence the industrial development
    of the state;
Seeing films of the principal lakes of the state;
Finding out where the city water supply comes from;

Learning how reservoirs and dams help to conserve water;
Finding out about methods used for flood control.

Conservation of Human Resources

Finding out what agencies in the community conserve the health of
the people;
Finding out whether all the children in a community are receiving as
much education as they should;
Learning about the best use of income;
Studying and practicing ways of preventing accidents.

Community problems

The last two decades have witnessed a tremendous increase in the emphasis given to community life in the program of the elementary school. Elementary education is now generally recognized as having a dual function: first, to provide opportunities for each child to realize to the greatest extent possible his own innate potentialities; and, second, to improve the quality of living in the community.

In schools that seek learning situations within the realities of community living, the social-studies program is enriched, and boys and girls have an opportunity to develop attitudes and habits of cooperation, self-direction, initiative, and consideration for the rights of others. In these schools children are led to understand the activities in which the community engages to satisfy basic human needs; the social, economic, political, religious, and recreational institutions in the community; and the problems involved in making the community a better place in which to live.

Many methods are used to bridge the gap between the school program and the life of the community. Trips are taken to farms, gardens, nurseries, dairies, markets, train and bus terminals, airports, the post office, the museum, and the courthouse. Individuals in the community are brought in to talk to the class; interviews are held with people in the community who have special skills or information; experiments are conducted; parents bring in for an exhibit such articles as spinning wheels, guns, rag rugs, and old costumes and glassware; and children plan and conduct community-improvement projects.[18]

Books play an important role in developing significant concepts relating to community life, in developing social attitudes, and in helping children realize that it is through the cooperative efforts of many individuals that the

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[18] Paul R. Hanna and a group of assistants surveyed practices in schools throughout the country and reported activities in which young people have engaged relating to public safety, civic beauty, community health, agricultural and industrial improvement, civic arts, protection of natural resources, and preservation of local historical materials. Paul R. Hanna, *Youth Serves the Community* (Appleton Century-Crofts, 1936).

community is made a better place in which to live. Such books as *New Centerville*[19] help children learn about the interdependence of town, farm, and city life and how group action can bring about changes for the benefit of all. The teacher's edition suggests activities that will help pupils investigate similar problems in their own community. The book is intended for the third grade and contains units on the following topics:

> Business in Town
> The New Highway
> Food and Clothes for the Community
> Business in the Country
> The Community Builds a School
> Community Day

Intercultural education

An increasing amount of attention has been given in recent years to bringing education to bear as constructively as possible on the reduction of intercultural tensions, prejudices, and discrimination against minority groups. An essential characteristic of democratic education is that it aims to make it possible for every individual to participate fully in the life of the group and to be respected and accepted as a member of the group on the basis of personal merit.

It has been found that young children will live together in a democratic fashion without prejudices and discrimination, but as they grow older they learn the prejudices of their elders. It is the purpose of intercultural education to help children, as they grow older, to understand and appreciate the composite character of the American population, to collect scientific facts about the meaning of "race," and to develop a clear understanding that democracy means respect for human personality, regardless of color or creed.

Intercultural education is a relatively new venture in elementary schools, and very little has been done toward developing curriculum materials or procedures. An experiment conducted at six schools in Philadelphia provides a foundation on which future programs can be built. The study was designed to determine the nature and source of prejudices held by young children and how the children's attitudes could be changed. It leads to the conclusion that intercultural education must be a community concern, involving the active support of parents, teachers, and community leaders.[20]

[19] *Curriculum Foundation Program Series, op. cit.*
[20] Helen G. Trager and Marian Radke-Yarrow, *They Learn What They Live* (Harper & Brothers, 1952).

Aviation education

A social-studies program designed to help pupils understand the world in which they live and develop the skills and attitudes that will enable them to cope with the problems their world imposes upon them must find a place for aviation education. Few would advocate aviation as another discrete subject in on overcrowded curriculum, but most educators admit that it is a source of enrichment for existing content fields, a means of accomplishing recognized objectives of education, and an aid to pupils in understanding the realities of the environment.

The American Council on Education, in cooperation with the Civil Aeronautics Administration, has published a report containing useful suggestions for aviation education from the kindergarten through the senior high school.[21] Many state departments of education, in cooperation with state aviation commissions, have published bulletins dealing with aviation education.[22] Curriculum bulletins prepared by committees of teachers in local school systems usually contain units on aviation or emphasize air travel in units on transportation.

ILLUSTRATIVE ACTIVITIES USED IN AVIATION EDUCATION

Making an aviation scrapbook;
Drawing pictures of airplanes;
Making paper gliders;
Making a model airport;
Writing stories about airplanes;
Learning about air, wind, and the thermometer;
Visiting an airport;
Taking a trip on an airplane;
Looking at films such as *Seeing the Airport, History of Aviation,* and *Construction of a Light Airplane*;
Learning why airplanes stay up,
Learning airplane parts;
Learning various uses of airplanes;
Learning to "pilot" a miniature plane;
Making an aviation dictionary;
Study the effects of the airplane on American life;
Studying maps and globes to find out what is meant by a three-dimensional world.

[21] H. E. Mehrens, *Adventures in Aviation Education* (American Council on Education, 1951).
[22] *Air Age Education in Oklahoma* (State Department of Public Instruction, Oklahoma City, Okla., 1948).

Summary

1. Without losing sight of the value of acquiring useful information, the modern social-studies program helps each child to grow continuously in the abilities needed for effective participation in the life of a free society.

2. The social studies are concerned with human relationships, with the development of social literacy, and with the improvement of behavior.

3. The primary objective of the social-studies program is the improvement of group living.

4. The opinions of specialists, as well as current practice, favor the unified social-studies program over the teaching of history, geography, and civics as separate subjects in the elementary school.

5. The sequence of units in the social-studies program generally moves from the child's immediate environment toward places, events, and peoples farther removed in time and space.

6. The quality of the social-studies program is determined, in the final analysis, by the procedures that are used to make social experiences functional and meaningful for children.

7. Some of the major characteristics of effective teaching procedures are as follows: (a) children participate in many meaningful activities, (b) many types of instructional materials are used, (c) children learn to assume responsibility, and (d) evaluation of pupil progress is comprehensive, continuous, and cooperative.

8. Newer emphases in the social-studies program include education for family life, conservation education, community study, intercultural education, and aviation education.

9. The modern social-studies program provides opportunities for children to develop an understanding of our economic system, of our form of government, of the history of our nation, of the differences and similarities of peoples, of the contributions made by individual citizens to the general welfare, and of the rights and duties of citizens in a democracy.

SOME PROBLEMS AND PROJECTS

1. Several criteria for selecting worth-while activities are implied in the discussion on pp. 245-254. Make these criteria explicit by writing a statement

of each. Can you add additional criteria that have not been covered in the discussion? Consider answers to such questions as, "Is this activity suited to the age level of the children?" "Is there some worth-while content on which this activity is based, or is it merely an activity?"

2. On the basis of the criteria you have listed in doing the preceding assignment, suggest activities that might be substituted for the Eskimo activity, the post office construction, and the health play. Justify each of your suggestions in the light of your criteria.

3. Mrs. Tilden teaches third grade in a wealthy suburb of Chicago. "Our children are lovely children," she says. "They come from such nice homes. We don't have to teach intergroup education here because our children are all of the same class. There are no Negroes and no foreign population in the community except servants. We have no intercultural problems."

Is Mrs. Tilden right? Do children in restricted communities have needs with respect to intergroup education? What might these needs be?

4. Mr. Durkin finds that his class expresses many prejudiced attitudes toward minority groups. He wants to help his pupils acquire attitudes that are more democratic but he is not sure just how to go about it. Evaluate each of the following methods from the standpoint of their effectiveness in changing attitudes toward a specific group:

Having a unit on "Negro Folk Songs";

Learning a Mexican dance;

Cooking Italian dishes, such as spaghetti;

Dramatizing a Chanukkah celebration;

Planning a community project with children from a different subcultural background (i.e., Negroes and whites; upper-middle and lower classes; new Americans and "old families");

Having the opportunity to get acquainted with a minister, a priest, and a rabbi and to hear each tell about his religion;

Studying "Famous Foreigners and What They Have Done for America."

Read Kagan's *Changing Attitudes of Christians Toward Jews* (Columbia University Press) for an evaluation of direct and indirect teaching methods in intergroup education.

5. The good social-studies teacher is very often faced with making a decision regarding the study of controversial issues. Such is the problem of a fifth-grade teacher in Centerville who does not know whether her class should study the United Nations as the course of study requires. Teachers in a neighboring community have run into difficulty with community groups for

including the United Nations in the curriculum. What should our fifth-grade teacher do? Should she avoid the controversial? If she includes the United Nations, what should be her approach? Is the best solution presenting both sides (as if there were only two) and letting pupils make up their minds, or does a teacher have a responsibility for helping pupils evaluate decisions from the standpoint of democratic values?

6. Here are some outcomes and activities suggested by one course of study for a unit on home and family life at the first-grade level:

Taking a walk around the neighborhood to look at different kinds of houses—colors, attractive yards, and the like;

Drawing pictures to illustrate the work of the father, the mother, and the child in the home;

An understanding of the purposes of the various rooms in the home and an appreciation of the conveniences and comforts of each;

An understanding of the various types of furniture and appliances found in the home and the uses of each;

An understanding of the various types of homes found in the neighborhood and of the provisions for safety and comfort.

Which of these are likely to make some pupils uncomfortable? Are these important learnings in connection with home and family life? Can you think of learnings more in keeping with the goals of democratic education?

7. How can a teacher use a unit on home and family life to foster acceptance of differences among people, including understanding of the following differences:

adopted children,
children who have only one parent or none,
physically handicapped children,
Negro children,
first-generation Americans,
Protestant, Jewish, and Catholic children.

What generalizations concerning each of the above might she hope children would acquire?

8. Social-studies textbooks for children in the primary grades have frequently been criticized for the inclusion of unrealistic material. One text, for example, describes a family in which the father is a shoe clerk. After a second child is born, the family decides to buy a house. They shop around and eventually settle for a brick house worth roughly about $20,000 on today's market. They furnish an attractive living room, a dining room, a kitchen with many electrical appliances, and several bedrooms.

Aside from being unrealistic, are there other criticisms of materials such as these?

Should a teacher raise questions concerning these materials with children or not?

9. Does criticism of this kind of teaching material imply that teachers should instead teach pupils that it is desirable to live in slum dwellings? What learnings might be more satisfactory? Would a generalization such as "we should not judge people in terms of the kind of house in which they live" be more in keeping with our social-studies objectives?

SELECTED READINGS

AMBROSE, EDNA, and MIEL, ALICE, *Children's Social Learning: Implications of Research and Expert Study* (Association for Supervision and Curriculum Development, National Education Association, 1958). Describes the school's role in fostering democratic social learning.

AMERICAN ASSOCIATION OF SCHOOL ADMINISTRATORS, *Educating for American Citizenship* (National Education Association, 1954). Chapter 8 deals with problems of scope and sequence in the social-studies program; presents several examples of social-studies programs.

ASSOCIATION FOR CHILDHOOD EDUCATION INTERNATIONAL, *Social Studies for Children* (rev., The Association, Washington, D. C., 1956). Suggests areas for concentration at the various grade levels.

DENVER PUBLIC SCHOOLS, *The Social Studies Program of the Denver Public Schools, Kindergarten Through Grade Twelve* (Denver, Colo., 1954). The official guide used by Denver teachers at all grade levels.

ELLSWORTH, RUTH, and SANDS, OLE, *Improving the Social Studies Curriculum* (National Council for the Social Studies, Washington, D. C., 1955). Presents basic principles, issues, and examples of improvement programs carried out in school systems.

HANNA, PAUL R., "Society—Child—Curriculum," in *Education 2000 A.D.* (Syracuse University Press, 1956), pp. 165–201. Presents six principles for creating a curriculum design in the social studies.

HARAP, HENRY, *Social Living in the Curriculum* (George Peabody College for Teachers, Nashville, Tenn., 1952). Gives a description and evaluation of social living programs in several schools.

MICHAELIS, JOHN U., *Social Studies for Children in a Democracy* (2nd ed., Prentice-Hall, Inc., 1956). Presents a synthesis of principles and procedures related to planning and development of experiences in the social studies. Emphasizes democratic values and behavior.

NATIONAL SOCIETY FOR THE STUDY OF EDUCATION, *Social Studies in the Elementary School* (University of Chicago Press, 1957). Defines the role of the social studies in the over-all program of the elementary school, the implications of knowledge about children, and current social trends.

NEWARK PUBLIC SCHOOLS, *Social Studies in Our Schools: A Guide to Improvement of Instruction in the Elementary School* (Board of Education, Newark, N. J., 1954). Describes the scope of their program in terms of areas in which growth is needed to meet persistent life situations.

OTTO, HENRY J., *Social Education in Elementary Schools* (Rinehart & Co., 1956). Presents general social characteristics of children at different ages, the objectives of social education, and the school's channels for social development.

PHILADELPHIA PUBLIC SCHOOLS, *Social Studies in the Elementary Schools* (Philadelphia, Pa., 1956). This comprehensive social-studies guide outlines the basic scope and sequence for the elementary school program.

PRESTON, RALPH C., *Teaching Social Studies in the Elementary School* (rev. ed., Rinehart & Co., 1958). Deals with objectives, content, organization, and methods of teaching the social studies.

SAN BERNARDINO COUNTY SCHOOLS, *Social Studies for Democracy's Children*, (San Bernardino, Calif., 1955). Contains an explanation of the nature of the learning process, background material on which the social studies are based, and examples of sound practices that have been found workable in actual classroom situations.

THRALLS, ZOE A., *The Teaching of Geography* (Appleton-Century-Crofts, 1958). Stresses the practice of teaching rather than the theory of teaching. Provides specific step-by-step directions.

WESLEY, EDGAR B., and ADAMS, MARY A., *Teaching Social Studies in the Elementary Schools* (rev. ed., D. C. Heath & Co., 1952). Analyzes the content of several courses of study in the social studies and points out similarities and differences.

WILMINGTON PUBLIC SCHOOLS, *Opening Doors: A Social Studies Bulletin* (Wilmington, Del., 1954). Uses problem areas to help define and organize school experiences of boys and girls: We learn about ourselves. We learn how groups function. We learn about our world. We develop the skills and tools we need.

SELECTED FILMS

Are You A Good Citizen? An 11-minute sound film, introducing a check list of citizenship essentials. Coronet Films.

Freedom to Learn. A 27-minute sound film. A teacher has her social-studies class compare the precepts and practices of communism with those of democracy, and is charged with advocating communism. Her defense is that students need to learn to judge the facts and that freedom to learn develops true citizens of a democracy. National Education Association.

History of Your Community. A 13-minute sound film, showing a group of eighth-grade pupils investigating the history of their community. The pupils learn that their community's history is part of the history of our country. Coronet Films.

Our Living Constitution. An 11-minute sound film, illustrating the importance of the Constitution in everyday life. Coronet Films.

Pioneer Home, A. An 11-minute sound film, showing the physical surroundings, homefurnishings, hard work, and simple pleasures of pioneer home life. Coronet Films.

What Our Town Does for Us. An 11-minute sound film, showing Billy making a tour of the town hall and learning how community governments are organized, what services they give, and how his bicycle tax and other taxes support community services. Coronet Films.

The only sound justification for giving arithmetic a place in the elementary curriculum is that it contributes directly to more effective living.—WILLIAM A. BROWNELL.

□ OUR MODERN industrial civilization rests to a large degree on the achievements of mathematicians. The spectacular progress of modern man in controlling the environment and harnessing the forces of nature to meet his needs has been possible because he had available a number system that was readily adaptable to a large number of practical problems. Indeed, many complicated mathematical procedures were invented because it became necessary to deal more adequately with some aspect of the environment than was possible with the means at hand.

Vocational success in certain fields depends to a large degree upon competence in mathematics, and at least some degree of competence in the fundamental processes of arithmetic is needed by everyone in connection with problems of daily life. Arithmetic is not only interwoven with the activities in which adults engage; it is also an integral part of the life of the young child. He uses it frequently in his everyday activities; his conversation is filled with statements and questions that reveal his interest in the quantitative aspects of his environment; and when he comes to school he is eager to know where things are, how many there are, and how big. If he is taught properly, if his work is planned so that he has a chance to succeed, if the first school experiences are related to the experiences he has already had, and if

teachers continue to relate arithmetic to his everyday experiences as he progresses through the elementary school, arithmetic can be profitable and enjoyable for him.

Arithmetic in the Changing Curriculum

The changes that have taken place in the elementary-school curriculum in the last half century are clearly reflected in the content and methodology of the arithmetic program. A few of us can remember the arithmetic program of the early 1900's; others can learn about it from examining the textbooks used at that time. The content was heavily loaded with topics and processes that were little used in the daily activities of children or adults; the computational phase of arithmetic was emphasized and practical applications were relatively neglected; and methodology was dominated by the idea that the practical uses of what was learned was comparatively unimportant, so long as it trained the "faculties" of the mind. A few pupils who had the ability and persistence to memorize the mass of meaningless material were able, by the time they completed the elementary-school program, to perform amazing arithmetical feats.

The results of this "barren pabulum" were disastrous for a very large number of pupils, arithmetic became the chief cause of failure and nonpromotion in elementary schools, and many pupils dropped out of school before they completed the elementary-school program. Dissatisfaction with the traditional type of arithmetic program reached a climax during the 1920's and 1930's. Some educators proposed that arithmetic should not be taught at all in the elementary school; others suggested that it be postponed until the child reached the seventh grade. Fortunately, these proposals did not make much headway. Instead of eliminating arithmetic from the elementary-school program, educators undertook to find out what had been wrong with arithmetic teaching in the past and to develop a functional program that made sense to children.

In 1953, it was reported that 1,100 studies of arithmetic had been made.[1] Summaries of these studies have been widely disseminated among members of the teaching profession and have influenced textbooks and other instructional materials, curriculum guides, and methods of instruction in arithmetic.[2] The results of intensive study and experimentation have been described by

[1] William Van Til, "Research Affecting Education," in *Forces Affecting American Education* (Association for Supervision and Curriculum Development, 1953), p. 120.
[2] See *What Does Research Say About Arithmetic?* (Association for Supervision and Curriculum Development, 1952); *What Research Says to the Teacher—Arithmetic* (Department of Classroom Teachers, National Education Association, 1953); and C. W. Hunnicutt and W. J. Iverson, *Research in the Three R's* (Harper & Brothers, 1958), pp. 347–427.

one writer as "The Revolution in Arithmetic." [3] A film explaining how research has changed the elementary school states, "Arithmetic has been taken from the blackboard and put into real life." [4] Many careful studies of children's achievements show that, in arithmetic, children in our schools today are doing better than any previous generation. [5]

Factors influencing the development of a more functional curriculum in arithmetic have been too numerous to attempt a complete discussion of them here. In the main, they are the same factors that have influenced the whole elementary-school curriculum. The discussion that follows centers attention on those factors that have influenced particularly the curriculum in arithmetic.

Studies of adult uses of number and number operations

A few decades ago, a number of studies were made to determine what arithmetic topics and processes were used frequently by adults in business, professional, and home life. On the basis of the findings of these studies, many topics and processes that were found to have little social utility were eliminated from the arithmetic curriculum. Examples of these are unusual fractions, such as $\frac{6}{7}$ and $\frac{3}{19}$, and apothecaries' weights. Some topics such as Roman notation received less emphasis than formerly. Similar studies resulted in adding to the arithmetic program topics and processes that function frequently in adult life, such as taxation and consumer problems; in fact, until very recently, arithmetic in the seventh and eighth grades was primarily business arithmetic.

In recent years, and particularly since the advent of man-made earth satellites, serious questions have been raised about the advisability of a major emphasis upon making arithmetic practical and relating it to problems of living. Mathematicians who are interested in revising high-school mathematics programs point out that older students are interested in ideas; that bright ones in particular enjoy working with abstractions. "Despite the current fashion to point out the usefulness of mathematics in various occupations, most high school students are not genuinely stirred by such a 'sales campaign.' The goal of vocational utility is too remote to make much difference to a ninth grader. He wants to know how mathematics fits into his own world. And, happily, that world is full of fancy and abstractions. Thus stu-

[3] William A. Brownell, "The Revolution in Arithmetic," *The Arithmetic Teacher*, February 1954, pp. 1–5.
[4] *Willie and the Mouse*, Teaching Films Custodians.
[5] See Harold G. Shane, "We Can Be Proud of the Facts," *The Nation's Schools*, September 1957, p. 45; and Beryl R. Rock, *Children's Achievement—Today and Yesterday* (Texas Elementary Principals and Supervisors Association, Austin, Tex., 1952).

dents become interested in mathematics because it gives them quick access to a kind of adventure, which is enticing and satisfying." [6]

There is considerable evidence that the point of view expressed in the quotation above is beginning to influence the arithmetic program in elementary schools. There is more emphasis on the nature of the number system and principles of mathematics. Some publishers are calling their textbooks elementary school mathematics instead of arithmetic and curriculum guides in some school systems carry the title *Improvement of the Teaching of Mathematics—Grades 1–12.* A considerable amount of experimentation will need to be done before it can be determined how far this trend can be extended into the elementary-school program, but efforts to strengthen the content of the arithmetic program are certain to continue.

Studies of the uses of number by children

A number of studies have been made to determine what quantitative expressions children encounter, what number processes and facts they use, and what situations requiring skill in the use of numbers they meet in their daily lives outside the school. Information of this type has been used both to determine the most vital arithmetic content for various age levels and to motivate the study of arithmetic by relating it to the actual experiences of children. Studies have also revealed that opportunities for using arithmetic exist in many curriculum areas such as the social studies, music, art, health, science, and physical education. Plans have been developed for teaching arithmetic in connection with these areas in the elementary-school curriculum. [7]

Studies relating to the learning difficulty of number facts and processes

Studies have shown that many topics and processes have been introduced before the average child has the experience background and the mental maturity to deal with them effectively. For example, division by two-place numbers, such as dividing 1492 by 36, has been moved from the fourth grade to the sixth because it was found that the mental age required to master this operation was 12 or 13 years instead of 9 years, which is the average mental age of fourth-graders. However, the concept of minimum essentials for each

[6] E. P. Rosenbaum, "The Teaching of Elementary Mathematics," *Scientific American,* May 1958, p. 71. Reprinted with permission of the publisher.
[7] See Vincent J. Glennon, *Arithmetic and Curriculum Organization* (School of Education, Syracuse University, Syracuse, N. Y., 1954).

grade is being modified as teachers learn that pupils differ widely in rates of learning. Many schools are experimenting with ungraded organizations and continuous progress programs which permit each child to progress according to his own pattern of learning.

Improvements in textbooks and other instructional materials

Textbooks in arithmetic and the teachers' manuals that accompany them provide the teacher with many suggestions for making arithmetic meaningful. Concrete materials that can be made by teachers and pupils or purchased from school supply houses offer endless possibilities for developing understanding of number relationships. Lists of materials such as blocks, disks, rulers, counting frames, and various measuring devices are found in books on the teaching of arithmetic, in professional magazines, and in curriculum guides.[a]

Studies of children

Over a period of many years a tremendous amount of information has been collected about the growth and learning of children and about teaching techniques that motivate learning. For example, it has been demonstrated that the environment plays an important role in the child's learning. From early childhood he is surrounded by a world of concrete objects and living things, from which he gains ideas of number, size, and measure. As growth continues, these ideas are elaborated and developed. Children learn to discriminate among the objects and people that surround them. Ideas and concepts continue to grow as the environment becomes more meaningful. Out-of-school environments vary greatly. Some childen have many opportunities to develop number concepts; others have limited opportunities. The classroom environment in the modern elementary school provides many materials for the development of number concepts.

The element of readiness is always a factor in learning. Research has revealed many facts concerning number readiness. We know that children possess some knowledge of number when they enter school.[b] Because there is a wide variation among children in the degree of number awareness, the

[a] See Ben A. Sueltz, "Counting Devices and Their Uses," *The Arithmetic Teacher*, February 1954, pp. 25–30.
[b] See B. R. Buckingham and Josephine MacLatchy, "Young Children's Number Abilities," in *Research in the Three R's* (C. W. Hunnicutt and W. J. Iverson, eds., Harper & Brothers, 1958), pp. 379–381.

teacher must adapt the arithmetic program to the maturity level of the children. After readiness has been developed for beginning work in arithmetic, the problem remains of developing readiness for each new step in the program.

We have stated that children live in a world of concrete objects. Concepts of number are first developed by having children manipulate objects. The next step is an understanding of symbols like dots, dashes, or drawings to represent the concrete objects. Some pass to this step more rapidly than others. Those who have difficulty should not be rushed. Eventually they reach the stage where they can associate number names with number concepts. They learn, for example, that 2 is one way of representing the concept of twoness. At this point they have less need of the "crutches" and can work directly with number names.

We know that children gain many concepts of number incidentally. However, these concepts are usually inadequate and not very well interrelated. The purpose of instruction is to help children progress from these inadequate concepts to a more precise grasp of the meaning of the number system. It is necessary, therefore, that the arithmetic program be organized systematically and presented in a certain order. Learning arithmetic is a developmental process. When a child wants to know how many objects he has, he counts them. After learning the number of objects in the group, he gains additional concepts by comparing the size of the group with another group, taking the group apart, and putting new groups together. Step by step, he develops the concepts necessary to enable him to perform computations and to refine his thinking. Since arithmetic is logical in nature, it is learned through a systematic and logically organized program.

Principles Underlying the Modern Arithmetic Program

The modern arithmetic program provides learning experiences through which the child learns the meaning of number and number operations, develops computational skills, learns about the social uses of arithmetic, and acquires a foundation for the study of other branches of mathematics. Principles underlying the modern arithmetic curriculum have been summarized as follows:

1. The learning of arithmetic is a gradual growth process that should be guided and directed at all stages by a systematic, planned program. Instruction should begin early in the primary grades.

2. The arithmetic program should include a well-integrated treatment of the mathematical and social phases of the subject, dealing with topics and processes of undoubted social value and significance to the average individual.

The more difficult computations such as are required in technical work should be deferred to levels beyond the elementary school.

3. The content of the curriculum should be related to personal and social needs emerging in current living both in and out of school. The evidence is clear that children have many quantitative experiences that should be made mathematically meaningful and socially significant to them.

4. The pupil should be made intelligent about the development, status, and likely future trend of important social institutions through which number functions in the community.

5. Arithmetic instruction should be done in close association with all school work in which the use of quantitative procedures will clarify the situation and help make it meaningful.

6. A most fruitful approach to the enrichment instruction is the consideration of significant problems that will illuminate the present social situation for the learner, particularly in the area of economic competence.

7. Growth in the ability to apply arithmetic effectively in social affairs is greatly facilitated by abundant experience in using number in a wide variety of purposeful group activities.

8. Even though much arithmetic is learned incidentally through contact with number in social experiences, such learning is neither systematic nor comprehensive. It is clear that direct instruction is necessary for mastery of the basic skills and efficient work methods.

9. Systematic provision should be made for adapting instruction to differences in the rates at which pupils learn.

10. The curriculum should be so arranged as to provide for continuity of child development, with a minimum of strain and tension, and it should be so organized that there is a reasonable likelihood of successful learning. The available evidence as to the learning difficulty of number processes should be carefully considered in the graduation of subject matter.[10]

Improving Instruction

Three prominent theories of arithmetic instruction have influenced curriculum organization and classroom practice. The oldest and most widely used is the drill theory; its advocates rely upon a very large amount of drill or repetition as the means of learning. They have pupils memorize rules and facts, such as the basic combinations, tables of measure, and the fundamental processes, without providing opportunity for an understanding of these facts. There are several reasons why this method of instruction has proved inadequate. First, it is very difficult for a pupil to memorized the large amount of factual material in arithmetic. Second, because children cannot remember all these facts, they use roundabout procedures of their own, such as counting their fingers to get the sum of two numbers when they have not learned the

[10] Washington County Schools, *Curriculum Development Program—Mathematics—Grades 1–12* (The Board of Education, Hagerstown, Md., 1955), pp. 1–3.

addition combinations. Repeated drill merely strengthens these inefficient habits. Finally, because of a lack of understanding of what they are trying to do, students become confused and discouraged. This inevitably leads to emotional disturbances. There are those who believe that the wide use made of this theory of instruction is the cause of so many recorded failures in arithmetic in the elementary school.

The second of the recognized theories is known as the *incidental-learning* theory. Advocates of this theory hold that arithmetic can be taught most effectively if instruction is provided only when the child has a need for the fact or process. There is no planned program of arithmetic instruction; number experiences are utilized as they occur in connection with other activities of the school; and understanding comes as a result of a felt need on the part of the child.

The primary weakness of this theory is that it has seldom produced desirable results in practice; studies show that the activity program provides too few occasions for learning arithmetic and that these experiences do not come in logical sequence. There is no question that much arithmetic is learned incidentally and that the activity program is valuable for motivating the learning of arithmetic. Most schools find, however, that if arithmetic is to be learned adequately, it must be taught systematically.

The third theory is relatively new in name. The *meaning theory* was first publicized in the Tenth Yearbook of the National Council of Teachers of Mathematics in 1935.[11] This theory recognizes clearly both the computational and the social aims of arithmetic; it holds that both aims can be accomplished only if children understand the meaning of what they learn; and it conceives of arithmetic as a closely knit system of understandable ideas, principles, and processes.

The meaning theory is now accepted by virtually all the authorities in the field of arithmetic. It attempts to teach number as a system rather than as isolated facts. It emphasizes concept-building through the use of concrete materials and the recognition of the relationships in arithmetic. It holds much promise for the future of the program of instruction in arithmetic. The procedures and techniques discussed in the following pages are based upon the meaning theory.

Adequate equipment

The teacher's readiness to teach is as important as the child's readiness to learn. One of the most important responsibilities of the teacher is the

[11] Tenth Yearbook, National Council of Teachers of Mathematics, *The Teaching of Arithmetic* (Teachers College, Columbia University, 1935).

procurement of adequate equipment. Very few classrooms have sufficient equipment on hand to enable teachers to teach arithmetic concretely; frequently almost all that is provided is a blackboard and a textbook. Since the child's progress in learning to use arithmetic depends largely upon understanding, an abundance of concrete materials should be available in the classroom. These materials need not be expensive; they may be shared by more than one teacher; and they should be selected wisely. The following list illustrates the types of materials that can be used effectively:

Large clock dials
Current and yearly calendars
Date stamp
Rulers
Yardsticks
Tape measures
Blocks
Scales
Measuring spoons
Fruit jars
Milk bottles
Measuring cups
Berry baskets
Abacus
Wooden or cardboard counters
Dominoes
Ball of string
Compass
Adding machines

Metronome
Thermometer
Toy telephones
Telephone directory
Real postage stamps of various denominations
Toy bank
Toy cash register
Blank checks
Fractional disks cut in geometric patterns
Egg cartons
Sand
Timetables (railroad, bus, and airline)
Automobile license plates
Stop watch
Coins, tickets, price tags

Developing number readiness

Number readiness is a fundamental factor in the learning process. As we have seen, not all children who enter the first grade are ready for numbers. One reason for this lack of number readiness is a limited environmental experience of the child prior to entering the first grade. A second reason is the lack of ability. In either case the task of the teacher is the same—to provide pupils with rich, varied social experiences which will give meaning to number and its uses. These experiences will fill in the gaps for those who have had only limited opportunity and will stimulate the mental growth of those with limited ability.

There are two aspects of number readiness that must be considered. The first is the readiness of the child to begin a study of number when he first enters school. How is the teacher going to determine the child's state of number readiness? General readiness tests may be of some value. In most

cases, however, the teacher will have to depend upon personal observations of the child's behavior. The following factors are among those that the teacher should consider in her observations:

The child's mental ability;
His ability to learn to read, together with factors that condition this ability, such as vision, hearing, experiential background, and the like;
His range of quantitative information;
His memory span;
His ability to see and use relationships;
His interest in number;
His work habits;

The child's needs can be determined by careful observation of his behavior in these areas. Once these needs are determined, the teacher can proceed with a readiness program suited to these needs and thus prepare the pupil for the number program. The second aspect of the readiness program involves the readiness of the child to advance from one level of learning to the next. Determination of readiness at this stage of development is dependent upon his knowledge, understanding, and skill at the preceding level. In addition to her own observations, the teacher may find standardized readiness tests valuable as the children grow older. Informal tests of her own making may also be used for obtaining the data needed.

Once the state of number readiness has been determined, what is the nature of the readiness program that will provide students with needed experiences? The following list of activities will develop a readiness for number concepts:

1. Activities to provide concrete experiences: measuring, cutting, construction work, drawing, and dramatizing;
2. Activities to provide observational experiences: the study of pictures, drawings, and movies;
3. Conversational experiences gained from informal discussions of the actual number experiences of the children and of number stories told or read by the teacher;
4. Experiences gained through planning activities involving the use of numbers.

Many similar activities involving the use of number will occur daily in the classroom. The teacher must take advantage of every opportunity to show children the ways in which number functions in their lives.

Developing basic number concepts

The fundamental number experience is counting. Innumerable opportunities for counting occur early in the life of the child and represent the

actual needs of the child. He counts the objects with which he plays and thus gradually comes to understand the meaning of a very few numbers. When the child enters school, the opportunities for counting increase. The wise teacher will organize these opportunities into an effective program of learning activities.

ROTE COUNTING. Saying the number names in order is usually thought of as rote counting. There is a great deal of controversy as to its value to the child. Its advocates hold that it is the basic counting ability, that the number names and the sequence in which they occur must be learned before the child can consider the group. It is true that children must learn the number names and establish their sequence. The danger in this form of counting, however, lies in the fact that it is a mechanical process. Teachers are often led to believe that students who can recite the number names in rapid order have an understanding of the meaning of number. What appears to be understanding may be only mechanical response.

RATIONAL COUNTING, OR ENUMERATION. Rational counting is associating the number names with the corresponding number of objects. When counting concrete objects, such as blocks, the child is counting rationally. This ability comes slowly, and the teacher must be certain that the child is not responding mechanically. Activities which will help are counting the children at a table, checking the number of books on a shelf, counting the number of chairs required for a group, etc. The child should learn that the last number named is the total of the objects counted.

THE SERIAL IDEA OF NUMBER. This type of counting involves an understanding of the order of our number system. There are two designations, known as the cardinal and the ordinal. Cardinal numbers tell how many things are being considered—one, two, etc. Ordinal numbers are first, second, third, etc., and are used to indicate position or sequence.

GROUPING EXPERIENCE. Unless they are guided to higher steps in learning, many children will be content to stop with the counting process. The next logical step in the sequence of arithmetic learning is the study and comparison of one group with another. With groups of concrete objects the child sees that a group of five is two more than a group of three and a group of three is less than five. Practice should be provided in counting groups, in matching groups one to one, and in determining the numerical difference between one and another.

The next step is the recognition of small groups without counting. It is recommended that the objects be arranged in some definite pattern, as this makes for easier recognition. Cards showing various arrangements of number groups can be exposed without giving the child time to count the number of objects in the groups. Later they may be posted in the room for the children to examine and study further.

The child must be able to identify and reproduce groups. He learns to identify a group of five among groups of four, five, and six. He chooses the picture with five circles, the basket with three apples, the box with four marbles. Not only must the child be able to identify groups but he must learn to reproduce them. He arranges his blocks into groups of various sizes as directed by the teacher. He places five chairs at the table, gets four books from the library shelf, or represents a group of three by drawing circles.

SUMMARY. In the past there has been too little emphasis placed upon the counting process in arithmetic. It is so fundamental to the understanding of our number system that it warrants more consideration. In learning to count, the child gains his first concept of quantity. In learning to recognize, identify, and form groups, he gains an understanding of the number system and learns quantitative thinking, which is the ultimate goal of all arithmetic instruction.

Developing computational skills

The traditional teacher attempted to have the pupils memorize all the combinations. The modern teacher uses a different approach. She leads the children through a study of a single number group by taking it apart and putting it together again in all of the different arrangements possible. The number group "six" is seen as:

> a group of six objects
> two groups of three objects
> groups of four and two
> groups of two and four
> groups of five and one
> groups of one and five
> three groups of two

At first taking apart and putting together is done with concrete objects. During this period the child discovers the different combinations that make six. After he has had experience with concrete objects, he records them pictorially. Finally, the teacher leads him to the use of abstract symbols. Combinations developed in this manner make sense to children. Each number group can be developed in this way. The teacher will have to make some variation in the developing of the teens groups, but the general idea of taking groups apart and putting them together again still holds. This is the foundation of the operations in addition and subtraction.

The idea of taking groups apart and putting them together again can be applied to multiplication and division facts also. In this case the group is divided into equal groups. The student will see that a certain number of

equal groups equals a certain group and that certain groups can be divided into a number of smaller groups that are equal.

It is not necessary to wait until all the combination facts have been developed to start using them. When the teacher feels that a basic understanding of any of the facts has been established, she can have the children begin to use them. This early practice will help to fix the facts more firmly in the child's mind and develop his facility in using them. The teacher should be careful to select problems that have real meaning for pupils. An alert teacher will discover many classroom situations from which to draw problems. If these situations do not present sufficient material for adequate drill, she can supplement them with problems of her own choosing if they have real meaning in the lives of the pupils.

In teaching the four fundamental processes, the traditional teacher stated the rule, illustrated it with one or more problems on the blackboard, and then provided long periods of drill. It was hoped that many repetitions would enable the pupil to remember the rule when it was needed in the future. However, many pupils who were taught by this method had no understanding of what they were trying to do or why they were doing it.

The modern teacher uses a different approach in teaching the arithmetic processes. If possible, she selects a real problem from the classroom situation so that the children feel a need to solve it; then, step by step, she leads them to a solution of the problem, allowing them to discover as much of the process as possible from what they already know. As they progress, they use concrete and semiconcrete materials freely to illustrate and record new ideas. When the process is completed she encourages them to express the new process or rule in their own words. If these indicate an adequate understanding, she does not attempt to have the children learn her words or those stated in the textbook. When she feels that a child has finally developed an adequate understanding of the process, she then provides drill to increase his skills and maintain them at the appropriate level.

Processes developed in this manner have meaning for the pupils. When there is understanding on the part of the child, arithmetic ceases to be a disliked subject. Another advantage is that the child does not have to rely upon his memory. At any time in the future he can develop the process again if he has need for it.

Developing fractional concepts

By the time they enter the first grade, children have already acquired some knowledge of fractions.[12] Differences in individual ability and pre-

[12] Ada R. Polkinghorne, "Young Children and Fractions," *Childhood Education*, May 1935, pp. 354–358.

school environments, however, produce a wide range of difference in the knowledge that has been acquired. It is desirable that these gaps be filled in during the primary years.

Experience has shown that children have a need for concepts of fractions in their everyday school life. These needs arise from natural situations in the classroom. A child desires to share a piece of candy, an apple, or a stick of gum. Or perhaps he needs half a sheet of paper or to draw a line half as long as another line. In meeting these needs, primary-school teachers use a very informal approach. Incidental experiences lead to a familiarity with the names of fractions. The child will develop a concept of one half and one fourth and will learn that two halves equal a whole. It is not expected that this instruction in the primary grades will develop thorough and complete understandings; rather, it will provide a rich background for the systematic study of fractions in the intermediate grades.

In the intermediate grades the systematic development of fraction concepts begins with manipulation of concrete materials in much the same way as whole-number concepts were developed. As stated earlier, each teacher should gradually gather together a collection of appropriate teaching materials. Sectional spheres or disks are particularly good for teaching fraction concepts. Paper pie plates are inexpensive and can be cut into appropriate parts. In the absence of any of these materials, sheets of plain paper can be used. A sufficient quantity of materials should be provided so that each child has a set to manipulate at his desk.

The first concept to be developed is the relationship of the parts to the whole. By actually dividing an object, such as a paper plate, into four equal parts, children discover that each part is one fourth, and that the sum of the parts makes the whole. This procedure is continued until the most commonly used unit fractions become familiar. As the children work with concrete materials, they discuss their findings freely in order to learn the language of fractions. They learn to record them with pictures and drawings and, finally, with abstract symbols. The teacher leads them to understand the meaning of the numerator and the denominator, to recognize the differences in the size of parts, to see the relationship between parts and smaller parts, the exact comparison of parts, and the relationship of fractions to measurement.

In most schools the four fundamental processes with fractions are introduced in the fifth grade. By this time pupils have had considerable experience in working with fractions. By taking objects apart, comparing the parts, and putting them together again, they have encountered problems involving addition and subtraction. New concepts are developed in the same manner. The final stage in learning is the ability to work on the abstract level. After the pupil has reached this stage, it may be necessary for him on occasion to return to the concrete or semiconcrete to rediscover some concepts.

Developing concepts of measure

The study of measure begins in the first grade and continues throughout the child's school life. Since it is impossible to teach all the known systems, a choice will have to be made as to what measures will be included in the arithmetic program. The basic consideration in making this choice will be the needs of the child. These needs will vary somewhat with the environment in which the child lives. Children living in a rural community will have different needs from those living in an urban community. Generally, the most commonly used measures are selected. Certainly any measures that are much used in that particular community should be included.

Children learn measures best through use. Countless opportunities for the development of concepts of measurement occur daily, both during and after school hours. Children learn to tell the time of day, the day of the week, and the day of the month. They measure materials in the manual-arts class and weigh themselves in their health period. They watch the thermometer and learn to measure heat. They collect money for lunches, for the Junior Red Cross, and for their parties. The wise teacher takes advantage of all of these opportunities to make measurement a functional area of study.

In the primary grades the program is informal, allowing the children to gain experience with measure as the need arises. No attempt should be made to have them memorize tables of measure. Learning a little each year, they gradually extend their knowledge and skill. Whenever it is possible and appropriate, children should be encouraged to make estimates before they do the measuring. This will increase their concepts and skills in dealing with measures. It will also prove valuable in later life, since there are many times when an individual needs to make estimates in lieu of the actual measurement. If the classroom environment does not provide a sufficient number of problems to afford adequate practice, problems from the textbook may be used. The teacher should be careful to select problems that are closely related to the lives of the children.

The experiences with measures that are begun in the primary grades are extended in the intermediate grades. The four fundamental processes with denominate numbers—that is, with specific measurements, such as 7 feet, 4 hours, 5 pounds—are introduced, as concretely as possible. The principal difficulty lies in carrying and borrowing. Since by this time the students will have begun their experiences with fractions and mixed numbers, the idea that only like things can be added or subtracted should not be new.

Drill is important

There has been a great deal of misunderstanding about the role of drill in the arithmetic program. Used at the proper time and in the proper

manner it is an effective method of teaching. Four principles govern the use of drill:

1. Drill should come after understanding has been acquired. One of the purposes of practice is to fix facts and procedures in the mind of the child. Practice that comes before understanding will tend to fix erroneous ideas and faulty thinking. There should be a relatively long period of time between the introduction of a process and the beginning of drill on that process. When the teacher feels that a sufficient understanding has been developed, she should provide drill. Not all pupils will reach this stage at the same time, and a close check must be kept to ensure that pupils do not attempt drill before they have achieved understanding.

2. Pupils must see or feel a need for practice. Situations should be created that will require extensive use of arithmetic procedures, and these situations should continually stimulate a desire for improvement. When the pupil has the desire to improve his skill, he is ready for drill.

3. Practice should be focused directly on the process involved. Once understanding has been acquired and a desire for improving the skill created within the child, there is little accomplished in playing games or using devices that take time to learn to operate.

4. Not all arithmetic is important enough to require drill. To attempt to master every phase of arithmetic by drill places too large a load on the learner. Once a skill has been developed to an acceptable level in each child, only an amount of drill sufficient to maintain it need be provided.

The improvement of problem-solving

No part of the child's school experience is more important than problem-solving. Ability to solve problems is one of the major objectives of instruction not only in arithmetic but in other areas as well. The child who learns to think more accurately and to find solutions to problems without depending upon others will be in a position to contribute to group welfare in the future.

Most arithmetic texts today use the terms "problem" and "story problem" to distinguish between two kinds of practice material. In a problem, the operation or operations are indicated. In a story problem the quantitative situation is stated in words and the student must decide what operations are necessary to reach the solution. The following illustration indicates the differences between a problem and a story problem:

PROBLEM	STORY PROBLEM
Multiply: 25 40	John earns 25 cents an hour working in the school cafeteria. If he works 40 hours, how much does he earn?

There is a place in the arithmetic program for the use of problems, but good story problems are more likely to result in genuine quantitative thinking. Problems may be used for short drill periods on a specific process after understanding has been acquired, but the introduction of the process should be made through real problem situations.

The program of instruction in arithmetic should provide for both incidental and "planned-for" story problems. Incidental problems, growing out of the experiences of the pupils, may be used in developing many worthwhile understandings and skills. The teacher should encourage students to state these problems in words. Then the class as a whole may help solve them.

Since the incidental problems will not afford adequate practice, it is essential that the teacher provide many additional story problems. The "planned-for" story problems are those taken from the unit being studied or from the textbook. Great care must be exercised in their selection, because not all of the story problems printed in the textbooks are good.

Teachers should apply the following criteria to story problems that they present to pupils:

1. The problems should deal with real situations that are a part of the experiences of pupils for whom they are intended.

2. They should deal with situations that make a strong appeal to the pupils for whom they are intended; they should be interesting.

3. The language used in the problems should be easily understood by the pupils. It should be free from unfamiliar words and forms of expression. The style should be attractive—one that pupils like to read.

4. Problems should be closely related to the lessons on the fundamental processes that pupils have been studying. They should put into practice the fundamental skills that pupils have been acquiring.

There has been a great deal of research on errors that pupils make in solving story problems. Most of the studies have dealt with the traditional type of textbook problem. If the criteria indicated above are followed in the selection of "planned-for" story problems, many of these difficulties will be eliminated. The first step in the improvement of problem-solving is the identification of the difficulties pupils are having. An analysis of their written work should reveal many of the errors. After analyzing the pupil's written work, the teacher should have him work the problem aloud in order to determine errors in thinking. To facilitate future planning, complete records should be kept of the errors made by each individual.

Once the difficulties have been identified, a program of remedial instruction should be initiated. Difficulties found most commonly are a lack of understanding of the problem and lack of skill in the four fundamental processes. Lack of understanding may be due to poor reading, inadequate

vocabulary, or poor concepts of the number processes. Exercises to correct these deficiencies should be planned carefully. Most authorities suggest exercises in reading to find (1) what facts are given, (2) what is to be done, (3) an approximate answer, and (4) what process is to be used. Exercises similar to those used in the reading program may be used to increase vocabulary. Graphical representation is a valuable aid in developing concepts of the processes involved. Only one type of exercise should be employed at a time. One group of problems will be used to find what facts are given, another to find what is to be done, and so on.

In problem-solving, the emphasis should be placed upon the correctness of the process rather than of the answer. Just as a pupil must have understanding of number processes before developing skill in computation, he must have an understanding of the processes involved in problem-solving before he can develop skill in the use of these processes. Accuracy is important, but it will develop rapidly once an understanding of the processes involved is acquired.

Providing for individual differences

The classroom teacher can expect to find a wide range of individual differences in arithmetic ability and achievement among the pupils in any one class. In the process of identifying and providing for the able and the not-so-able, teachers also find the occasional rare pupil with a high level of mathematical ability. We are not sure of the origin of this ability. There may be a special genetic factor at work, which produces a potentiality for mathematics. Or it may be that the early experiences of some very bright children are such that they "come to think mathematically." Children with all of these varying abilities must be provided for in the classroom. Here are some suggestions:

1. Ability to compute accurately and quickly is not necessarily an indication of high-level ability in arithmetic. Some pupils who may actually have a low-normal intelligence can be taught to perform computation skills very well indeed. Their computational ability will be superior to their problem-solving ability. Their work should be planned to include difficult computation but simple story problems.

2. Pupils who are high in intelligence as judged by test performance can be expected to do excellent work in arithmetic. If a pupil does not do so, it may be that he has developed an emotional block toward the subject, either as a result of unpleasant early experiences or as a result of family expectations ("Your father and I were both terrible in arithmetic; the Tilsons and Browns always have been"). Or it may be because he lacks some of the basic skills

(he does not know the answer to 6 × 9). Or it may be due to personality characteristics; he may make "careless" mistakes as a result of too-hasty work. Or his poor performance may be the result of insufficient challenge, of having to do too many pages of drill-type exercises at a level that has long ceased to be challenging to him. For some of these pupils a remedial program to overcome basic deficiencies is in order; for some the most effective motivation to better work consists in teaching them advanced content including skills and concepts usually taught in a grade or two beyond where they are.

3. A few of the readers of this book will have in their classes some children who will become our future mathematicians and physicists. In arithmetic classes, they are the ones who can see relationships, solve story problems, discover principles, and enjoy wrestling with mathematical problems. They should be encouraged to go far beyond the requirements of the grade and to make the most of their ability. Their practice should include a built-in checking system so that they do not practice errors as they work independently. On occasion one of these pupils may be a low achiever in the language arts. If his reading rate is slow, he needs to be motivated to read more in order to build up reading skills.

Evaluation of Pupil Progress

The process of determining the extent to which the objectives of arithmetic instruction have been accomplished is called evaluation. It consists of defining, collecting, recording, and interpreting the evidences of the growth of individuals as the results of experiences that have been provided. Evidence is collected through tests, observations, conversations, and self-appraisal.

Defining behavior that indicates the accomplishment of the objectives of arithmetic

The first step in an evaluation program is to determine what the desirable outcomes are and to define the acts of behavior that will indicate the extent to which outcomes have been accomplished. The program of arithmetic should develop good attitudes and work habits in each child. Observable acts of behavior that indicate the presence of these traits are: (1) careful planning, (2) working well with others, (3) acts that indicate the child likes arithmetic, (4) bringing to class problems the child encounters outside the school, and (5) evidence of thinking through an arithmetic problem.

As the child's knowledge and use of number is extended, he should develop an understanding of the value and social significance of arithmetic and acquire skill in using it in his daily activities. Is he able to make use of his

number knowledge in school activities, in making purchases at the store, in telling time, and in reading the thermometer in the schoolroom? Does he understand the value of money, the use of the calendar, and the differences between A.M. and P.M.? Can he locate pages in a book, addresses of homes, and room numbers in the building? Positive answers to these and many other questions can be taken as evidence of an understanding of the social value of arithmetic.

One of the most important outcomes of the arithmetic program is a thorough understanding of the number system and arithmetical processes. Success in all other phases of arithmetic depends upon the accomplishment of this objective. In seeking evidence of this understanding the teacher will need to observe the child as he works, listen to what he says, and test his knowledge. Can he divide a group of six objects into other groups as directed? Can he divide an apple into halves or a paper plate into fourths? Can he explain what he is doing and why he is doing it? Can he solve story problems? Ability to perform indicated operations with numbers and to explain his work can be taken as evidence that he has an understanding of the function of numbers.

Computational skill has long been considered an important outcome of the arithmetic program. Evaluation of these skills is relatively simple. Does the pupil show evidence of ability to use the fundamental processes with accuracy and a reasonable amount of speed? An affirmative answer to this question, however, is not sufficient evidence of the child's computational ability. The teacher should make a complete analysis of all written work, observe the child while he is at work, and if necessary have him work aloud. By the use of all these techniques, sufficient evidence can be obtained to determine the extent to which these skills have been developed.

Techniques of evaluation—collecting the evidence

Most teachers use four techniques or types of evaluation. The type used depends upon the kind of information desired and the conditions under which it is to be obtained. The teacher should know the purposes and limitations of each type. In some situations one type may be preferable, in others two or more may be desirable.

1. *Observation* is one of the most valuable techniques of obtaining evidences of growth. By observing the child at work, or at play, listening to his questions and discussions in class, the teacher is able to analyze his strength and weaknesses, his habits and methods of work, and how well he has developed arithmetical understandings. When more specific observations are desired the teacher provides situations that will enable her to discover how well

a child understands certain concepts or particular skills. Primary teachers depend almost wholly upon this technique of evaluation.

2. *Informal conversation* is particularly valuable in determining faulty thinking or detecting inaccurate concepts. As the child works, the teacher discusses the problem with him, asking questions as to how and why he is doing certain things, or having him work the entire problem aloud. She can determine his attitudes toward arithmetic and detect poor habits of work. Because conversation is completely individual in nature, it is a most reliable method of obtaining desired information.

3. *Tests* are a very valuable means of collecting data pertaining to learning, if used properly. Great care must be exercised, however, in the selection of tests, because not all of them do a good job of measuring what they are supposed to measure and because scores are often misleading. Standardized tests are valuable for survey purposes. Diagnostic tests are useful in determining individual and class difficulties. Teacher-made tests can be used to test specific areas of teaching. Group-made tests—tests made by the group that is going to use them—are particularly valuable in developing an understanding of the purposes of testing. All tests should be carefully adapted to the pupil's level of understanding. Tests are often misused. The pupil should never be made to feel that his whole future depends upon the outcome of a test.

4. *Pupil self-appraisal* is one of the most valuable techniques of evaluation. It helps the pupil to analyze his own accomplishments and shortcomings and to know just what he can do to improve. Under the guidance of a skilled teacher, he learns to correct many of his limitations and to make the best use of his abilities. This evaluation may be in the form of individual charts, records, or graphs of achievement. Self-appraisal check lists may also be prepared for use by pupils.

Summary

1. Arithmetic is inextricably woven into the problems the adult meets from day to day and plays a vital part in the life of the young child.

2. In the modern school arithmetic is presented as an aspect of child development, as a way of thinking, and as an element in social organization and procedure.

3. The arithmetic program in the elementary school is influenced by the teaching staff's concept of the nature of the learning process.

4. Modern theories of learning as applied to arithmetic emphasize meaning, relationships, and understanding rather than isolated drill on abstract symbols.

5. Improving instruction in arithmetic involves (a) adequate materials, (b) developing number readiness, (c) developing basic number concepts, (d) developing computational skills, (e) developing fractional concepts, (f) developing concepts of measure, (g) improving the use of drill, and (h) improving problem-solving.

6. Grade placement of arithmetic topics has been influenced by (a) scientific research, (b) the organismic theory of learning, (c) the maturity level of the child, (d) the logical and sequential nature of arithmetic, and (e) the needs of the child as influenced by the local environment.

7. The trend of the arithmetic program has been toward elimination of seldom-used material and postponement of the introduction of more difficult topics until pupils are sufficiently mature to profit from such study.

8. Techniques for evaluating pupil progress in arithmetic include (a) teacher observation, (b) informal conversation, (c) the use of tests, and (d) self-evaluation by pupils.

SOME PROBLEMS AND PROJECTS

1. In a modern arithmetic curriculum, considerable emphasis is placed upon having children discover for themselves principles and generalizations about the number system. In place of memorizing rules for certain arithmetical processes, pupils use concrete materials to find out how numbers can be manipulated. To teach fractions, for example, a strip of cardboard may be used for a unit and other strips cut into fractional lengths. Each pupil is provided with a set of these strips. They work with the teacher, manipulating the strips, to discover fractional equivalents and rules for changing a given fraction to equivalent fractions. In a sense, they teach themselves how to reduce fractions to lowest terms, find the common denominator, and perform other operations with fractions.

Suppose you were a teacher in a fourth or fifth grade. Plan and construct an instructional aid to use in teaching fractions. Demonstrate its use in your college class.

2. Martha's trouble in arithmetic is that she is careless. Her teacher says, "Martha can really do the work and knows her basic facts but doesn't take

the time to do accurate work." Is Martha's problem an arithmetic or a personality problem? How does the teacher deal with it? Which of the evaluation procedures suggested in this chapter will help?

3. What should you do about the child who gets the right answer but gets by a long, roundabout route? If you ask him 9 + 6, he may mentally figure, "9 is 1 less than 10; 6 is 1 more than 5; 1 less and 1 more cancel each other out, so it's just like adding 10 + 5, which is 15."

Should he be commended or reprimanded for such a procedure?

Should he be encouraged to arrive at the answer to 9 + 6 automatically, or continue to think it out?

4. Suggest ways in which you can preserve the spontaneity, the creativity, the zest for problem-solving in arithmetic that many young children have, while at the same time you can help pupils achieve speed and accuracy in the four fundamental processes.

5. Many teachers use games of various kinds to help pupils learn the basic facts in addition, subtraction, multiplication, and division. Arithmetic games, however, vary tremendously in their educational value. Here are three samples:

Bean Bag. Teacher tosses a bean bag to a pupil and at the same time calls out a number combination, 7 + 5. The child is supposed to have the answer by the time he catches the bean bag.

Baseball. Teacher divides the class into two teams and draws a baseball diamond on the board. This is to be a multiplication drill on the 6 facts. She calls on one child to be the pitcher and another to be the batter. The pitcher "delivers" a number, say 7, to the batter. The batter must multiply 6 × 7 correctly in order to make a hit. He then goes to first base (by writing his initials in that box), where he stays until the next player on his team makes a hit. Score is kept of the number of runs made by each side.

Arithmetic Match. Pupils divide in two teams and line up on each side of the room. Teacher gives a number combination to each child. If he misses, he must sit down. Team having most players standing at the end wins.

Not one of these games is recommended for drill. Can you explain why? What criteria can you set up for judging the worth of a game? Should the arithmetic practice or the mechanics of the game occupy more time? Should the poor students have less practice than good students or more? What other questions might you ask to arrive at criteria?

6. Keeping your criteria in mind, make up a good arithmetic game for

use in drilling on the addition combinations. Defend your game to your classmates.

7. How can a sixth-grade teacher help a pupil who feels he is no good in arithmetic because it runs in his family? Can your evaluation procedures help?

8. Assume that you are a third-grade teacher, that your class is working on liquid measurement, and that you are trying to develop the table of liquid measurement with your pupils. What concrete materials will you use? How will you make use of them with your class?

9. How can a teacher utilize each of the following activities for the teaching of arithmetic in first grade? third grade? sixth grade?

Collecting money for the March of Dimes;

Conducting a scrap-paper drive;

Operating a school store where school supplies may be purchased;

Operating a school lunch program;

Weighing and measuring children.

10. Mike is a brighter-than-average pupil in the fourth grade of Edgemont School. Edgemont believes in a policy of continuous progress, or automatic promotion, through the elementary school. "We take care of indimatic differences in achievement by grouping within the classroom," explains the principal.

But Mike is slow in arithmetic. He has never mastered the addition, subtraction, and multiplication facts, and now in fourth grade he is supposed to be learning multiplication by more than one digit. He is completely lost. His teacher says, "He is in the slowest group in arithmetic and I go very slowly with these pupils." However, although the teacher presents the new material slowly, it is still the same material she is giving to the rest of the class.

Mike's case represents what happens all too often in the elementary school. Along with a policy of promoting pupils regularly, regardless of achievement, there goes a fixed body of content and skills to be mastered at each grade level. Consequently, a fourth-grade teacher may have pupils who do not know the basic number combinations but nevertheless she will begin teaching division and justify it by saying that she takes care of individual differences by grouping and by covering new material slowly. What she does in effect is to deny the principle of continuous growth.

What can be done to help the Mikes in our elementary schools? Should Mike be sent back to second or third grade to master some of the funda-

mentals he has missed? Should his teacher give him extra work to do at home? Should she give him some diagnostic tests to find out his weaknesses and then plan her instruction accordingly? Evaluate each one of these steps in terms of possible consequences to Mike.

If his teacher has discovered that Mike does not know addition, how can she plan to help him with his deficiency when she has thirty-five other pupils to think of during the arithmetic period? What kinds of self-teaching devices can she use? How can she keep Mike's motivation high? Can other pupils be used to help Mike?

SELECTED READINGS

ASSOCIATION FOR SUPERVISION AND CURRICULUM DEVELOPMENT, *What Does Research Say About Arithmetic?* (National Education Association, 1952). Summarizes research finding on such problems as planning, scope, readiness, grade placement, and the use of crutches.

BECK, ROBERT H. (ed.), *The Three R's Plus* (University of Minnesota Press, 1956), pp. 154–168. The section on "Arithmetic in the Modern School," written by Leo J. Brueckner, takes the position that the technical aspects of arithmetic can be better taught if they are related to the social activities of daily life.

BRUECKNER, LEO J., and GROSSNICKLE, FOSTER E., *Making Arithmetic Meaningful* (John C. Winston Co., 1953). Deals with objectives, content, organization, and teaching procedures.

BROWNELL, WILLIAM A., "Meaning and Skill: Maintaining the Balance," *The Arithmetic Teacher*, October 1956, pp. 129–136. Suggests that the arithmetic program should emphasize both meaning and skill.

DEPARTMENT OF CLASSROOM TEACHERS, *What Research Says to the Teacher—Teaching Arithmetic* (National Education Association, 1953). Deals with the importance of understanding, readiness, individual differences, the use of rules, planning, grade placement, drill, crutches, and evaluating results.

GLENNON, VINCENT J., *Developing Meaningful Practices in Arithmetic* (Central New York School Study Council, Syracuse, N. Y., 1951). Suggests a more flexible elementary-school program.

——, *Teaching Arithmetic in the Modern School* (School of Education, Syracuse University, Syracuse, N. Y., 1953). Points out possibilities for teaching arithmetic in connection with units.

——, *Arithmetic and Curriculum Organization* (School of Education, Syracuse University, Syracuse, N. Y., 1954). Reviews three theories of arithmetic teaching, and provides illustrations of how arithmetic may be taught in connection with units in the kindergarten and grades 1–8.

HOLLISTER, GEORGE E., and GUNDERSON, AGNES G., *Teaching Arithmetic in Grades 1 and 2* (D. C. Heath & Co., 1956). Provides information and illustrations regarding teaching arithmetic in the early grades.

HUNNICUTT, C. W., and IVERSON, W. J. (ed.), *Research in the Three R's* (Harper & Brothers, 1958). Chapters 12, 13, and 14 summarize research findings relating to the teaching of arithmetic.

KYTE, GEORGE C., *The Elementary School Teacher at Work* (Henry Holt and Co., 1957). Chapter 8 deals with the purposes and procedures of the modern program in arithmetic.

MARKS, JOHN L., PURDY, C. R., and KINNEY, LUCIEN B., *Teaching Arithmetic for Understanding* (McGraw-Hill, 1958). Lists specific experiences for grades 1–8, emphasizing motivation, discovery, and understanding.

McSWAIN, E. T., and COOKE, RALPH J., *Understanding and Teaching Arithmetic in the Elementary School* (Henry Holt and Co., 1958). This book views mathematics as a language as well as a numerical structure. Emphasizes understanding of terms, concepts, operations, and applications of arithmetic.

MORTON, ROBERT L., *Teaching Children Arithmetic* (Silver Burdett Co., 1953). Contains detailed suggestions for teaching every phase of arithmetic to elementary-school children.

NATIONAL SOCIETY FOR THE STUDY OF EDUCATION, *The Teaching of Arithmetic,* Fiftieth Yearbook, Part II (The University of Chicago Press, 1951). Chapter 8 deals with the influence of various theories of learning on the teaching of arithmetic.

OKLAHOMA STATE DEPARTMENT OF EDUCATION, *Improvement of the Teaching of Mathematics* (Oklahoma City, Okla., 1957). Suggests what should be emphasized in the elementary mathematics (arithmetic) program and provides suggestions for teaching arithmetic and other forms of mathematics.

SPITZER, HERBERT F., *The Teaching of Arithmetic* (2nd ed., Houghton Mifflin Co., 1954). A textbook on the teaching of arithmetic intended for pre-service and in-service teachers.

———, *Practical Classroom Procedures for Enriching Arithmetic* (Webster Publishing Co., St. Louis, Mo., 1956). A real teaching aid for the new teacher as well as the teacher in service. Provides many new and improved practical teaching devices.

SWAIN, ROBERT L., *Understanding Arithmetic* (Rinehart and Co., 1957). An approach to the teaching of arithmetic which is comparatively new and challenging.

WHEAT, HARRY G., *How to Teach Arithmetic* (Row, Peterson, and Co., 1951). The organization of this book according to grade levels rather than by topics will appeal to many teachers.

SELECTED FILMS

The following represents only a few of the films that are available on the subject of arithmetic. The teacher should consult the nearest distributor of audio-visual materials for suggestions regarding films and film strips.

Primary grades

Addition Is Easy. An 11-minute sound film, demonstrating methods of teaching addition. Coronet Films. Other Coronet films for the primary grades are *The Calendar, Let's Count, Let's Measure, Making Change for a Dollar, Substraction Is Easy,* and *What Time Is It?*

What Is Four? A 20-minute sound film that pictorializes the differences between numbers. Illustrates the "four family." Young America Films.

Willie and the Mouse. An 11-minute sound film showing the difference between the old and the new methods of teaching arithmetic. Teaching Films Custodians.

Intermediate grades

Decimals Are Easy. An 11-minute sound film, showing the meaning of decimals and their importance in daily living. Coronet Films.

Division Is Easy. An 11-minute sound film, showing why division is important, and what must be done to master it. Coronet Films. Other Coronet films for the intermediate grades are *Measurement, Multiplication Is Easy, The Story of Our Money System, Story of Weights and Measures,* and *We Discover Fractions.*

Individual Differences in Arithmetic. A 20-minute sound film, illustrating techniques used to diagnose individual differences and difficulties that hinder pupils in the mastery of arithmetic. Encyclopaedia Britannica Films. Other Encyclopaedia Britannica Films dealing with arithmetic include *Meaning of Long Division* and *Meaning of Percentage.*

□ SCIENCE AND TECHNOLOGY present both the greatest promise and the most direful threat to man's survival and well-being in the second half of the twentieth century. They can be used for raising the standard of living, reducing disease and illness, and enriching and prolonging life. On the other hand, they can be used as the sorry handmaidens of destruction, oppression, and brute force. Greater efforts than ever before exerted must be applied to the problem of developing great scientists and to helping all citizens understand the influence of science on their personal and social problems. It is a dangerous policy to limit scientific information to a selected few, leaving the rest of the people to live in an age of science without the ability to understand or control it.

Science in the Elementary-School Curriculum

Although certain aspects of science have been taught in elementary schools for more than a century, the most systematic effort to give the subject a definite place in the elementary-school curriculum has been made since 1940.[1] One study reported that 17 states had prepared separate courses of study in science

[1] See Cleveland Public School, Science Course of Study; Cleveland Elementary Schools (Board of Education, Cleveland, Ohio, 1948), p. 1.

Exploring the Natural Environment— Science

To science, pilot of industry, conqueror of disease, multiplier of harvest, explorer of the universe, revealer of nature's laws, eternal guide to truth.—INSCRIPTION ON THE NATIONAL ACADEMY OF SCIENCE

by 1949 and that all but one of them had been prepared during or since 1941.[2] The number of guides to the teaching of science that were produced in 1951, 1952, and 1953 nearly doubled the output of the preceding three-year period.[3] State, county, and city school systems continued, between 1954 and 1958, to produce a large number of curriculum guides for elementary-school science and general curriculum guides containing chapters on elementary science.[4]

Plans for including science instruction in the elementary-school curriculum vary from one school system to another. Most schools use one or more of the following plans: (1) a definite time is set aside in the schedule for a broad, well-balanced program in science; (2) units relating to science are included in other curriculum areas such as the social studies, the language arts, health, and arithmetic; and (3) incidental learning situations are utilized. Children may bring plants, animals, metals, rocks, or mechanical devices to school. News items relating to floods, earthquakes, jet planes, or tornadoes may arouse interest and lead to profitable science learning.

The science program in the modern elementary school reflects what is known about the characteristics and needs of children, takes into account the fact that many social problems involve the use of scientific information and procedures, and is consistent with the broader objectives of the total elementary-school curriculum.

Using what we know about children

A great deal of research has been done on children's interests in science. Using these findings, the staff of the elementary school has an opportunity to develop a science program that utilizes some of the most universal and spontaneous drives of children. Some of the characteristics of children that need to be considered in planning the science program are discussed below.

IT IS NORMAL FOR A YOUNG CHILD TO INVESTIGATE. Young children like to investigate, to explore, to try to find out how things are put together and what makes things go. There is overwhelming evidence that curiosity and the urge to explore are powerful drives in children from the kindergarten through the sixth grade. The fact that children, as they grow older, seem to lose some of this enthusiasm for discovery is well known to teachers. There

[2] G. G. Mallison and K. E. Anderson, "A Survey of State Syllabi for Science," *Science Teacher*, February 1949, p. 40.
[3] Eleanor Merritt and Henry Harap, *Trends in the Production of Curriculum Guides* (George Peabody College for Teachers, 1955), p. 33.
[4] Association for Supervision and Curriculum Development, *Recent Curriculum Materials* (National Education Association, March, 1958).

can be little doubt that the school's emphasis upon accepting the word of the teacher and the textbook accounts for a large part of this loss.

With these facts about the nature of the child in mind, the modern teacher of science in the elementary school is depending less upon facts about science presented through a textbook or through her own words. Instead she takes living plants and animals into the classroom for children to handle and observe and she takes children out of the classroom to observe the world of science.

CHILDREN'S QUESTIONS REVEAL A WIDE RANGE OF INTERESTS. From the child's point of view, there are no artificial divisions of science, such as biological and physical. Children's questions in science cover a wide range of interests, relating to astronomy, biology, chemistry, geology, and physics.[5] Hence, it is no longer necessary or advisable to confine the work in the lower grades to aspects of biological science. Continuity and balance in the curriculum can be attained by providing experiences in each of the broad scientific areas at each grade level. This procedure makes it possible to take advantage of strategic opportunities for learning in connection with children's questions that do not fit into any rigid system of grade placement of topics.

CHILDREN SHOULD BE ENCOURAGED TO USE IMAGINATION. Teachers are generally aware of the imaginative nature of children's activities. Contrary to popular opinion, imagination is not unrelated to scientific thought. The development of many new and useful products has come about through imaginative thinking that advanced far beyond existing knowledge. Children, therefore, need to be encouraged to develop their imaginative impulses in formulating hypotheses to be tested later by observation and experiment. Dramatic play is used very effectively in the primary grades to help children understand the physical properties of things and to develop fundamental concepts about size, weight, time, and space.

CHILDREN LEARN THROUGH COOPERATIVE PLANNING. The science program provides many opportunities for learning through cooperative planning. Many teachers have found through experience that children learn more rapidly and enjoy the process more when given an opportunity to participate in planning. Research in the field of child development also supports this principle.[6] The evidence is overwhelming that from almost any angle, including sheer learning efficiency, democratic classroom procedures are more productive of lasting results than autocratic, teacher-dominated procedures. West found, for example, that in a democratic atmosphere children readily

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[5] This fact has been substantiated by Craig in a study of 6,806 questions asked by children. Gerald S. Craig, *Certain Techniques Used in Developing a Course of Study in Science for Horace Mann Elementary School* (Teachers College, Columbia University, 1927).

[6] K. Lewin, R. Lippitt, and R. W. White, "Patterns of Aggressive Behavior in Experimentally Created Social Climates," *Journal of Social Psychology*, May 1939, pp. 271-299.

assumed responsibility for group work in science, undertook voluntarily to perform out-of-school experimenting and reading, suggested new methods of doing things, and participated in numerous other ways.[7]

Democratic group procedures require a great deal of planning on the part of the teacher and a flexible class schedule that permits children to work together on a project for a longer block of time than is usually found in the traditional type of program.

CHILDREN DIFFER IN RATE OF GROWTH. Many studies have shown the tremendous difference in rate of growth of children. Croxton reported that the ability to apply generalizations, possessed by most ninth-grade pupils, is something that even a few kindergarten children have attained.[8] Haupt showed that children at each grade level generalize in terms of their experience, and that the generalizations in the lower levels differ from those in the higher levels by being less complex.[9]

These facts relating to the difference in rate of growth of children, together with the facts previously presented concerning the wide distribution of the science interests of children, are taken into consideration in planning the sequence of science experiences. In general, these facts argue for the spiral system of grade placement rather than the ladder system and for evaluation of pupil achievement in terms of the child's own pattern of growth instead of in terms of minimum grade standards.

CHILDREN LEARN THROUGH MANY TYPES OF EXPERIENCE. Science teaching in the elementary school offers many opportunities to capitalize on the natural tendency of children to be active. Such experiences as manipulating objects, collecting and constructing simple apparatus, caring for pets, raising plants, dramatizing, questioning, experimenting, and planning appeal to children far more than studying and reciting from a textbook. This is not to deny the value of good science books for children. Williams reports that children make varied and spontaneous uses of science books and that learning about science from books is for many a natural and enjoyable process.[10] Bergen reports that children commonly and spontaneously use books and other factual sources, in contrast to empirical sources. She points out, however, that children seem to recognize the appropriateness of observation and experimentation and probably get too little practice in using them, and that

[7] J. Y. West. Techniques for Appraising Certain Observable Behavior of Children in Elementary Schools (Contributions to Education No. 728, Teachers College, Columbia University, 1937).
[8] W. C. Croxton, "Pupil's Ability to Generalize," School Science and Mathematics, June 1936, pp. 627–634.
[9] G. W. Haupt, An Experimental Application of a Philosophy of Science Teaching in an Elementary School (Contributions to Education No. 633, Teachers College, Colombia University, 1935).
[10] A. M. Williams, Children's Choices in Science Books (Child Development Monograph No. 27, Teachers College, Columbia University, 1939).

the teacher may influence the children's choice of sources of information by her own remarks and by arranging apparatus, books, and other materials in the classroom.[11] Greene found a considerable gain in the measurable factual learnings in science as a result of marionette plays and plays partly written by children themselves.[12]

Scott and Myers report that many children have woefully vague and incorrect notions of terms they use rather glibly in their routine school work.[13] One reason for these misconceptions is the practice of introducing children to abstract terms and symbols before they have had sufficient firsthand experience. The subject matter of science lends itself well to providing children with excellent opportunities to learn through doing.

SCIENCE TEACHING SHOULD UTILIZE PUPIL PURPOSES. The role of pupil purpose in learning has been discussed in Chapter 2. Every teacher knows that learning is more rapid and more lasting, and has more valuable concomitants, when it is in line with pupil purposes. It is fortunate for the teacher of science that children come to school with an unusual assortment of purposes related to science. Some of these purposes may be narrow and trivial, and the teacher will need to stimulate worthier purposes or broaden those already held, but it is scarcely necessary to resort to artificial incentives in the field of elementary-school science, since its objectives correspond to so imposing an array of children's interests and needs.

The science program should recognize the following basic needs of the child: (1) the need to explore, (2) the need for intellectual stimulation, (3) the need to understand the physical world, (4) the need to have outlets for his imaginative life, and (5) the need to be recognized as an individual.

Social need as a guide for developing the science program

Since the curriculum-maker is concerned with the improvement of living, the science program must be closely geared to persistent problems of living. Many of these problems—especially those involving health, safety, conservation, and the elimination of superstitions and ignorant practices—require an understanding of scientific principles.

HEALTH. Probably the most important aspect of living that children can study is health. It is not only an important concern for the individual, but it

[11] C. Bergen, *Some Sources of Children's Science Information* (Contributions to Education No. 881, Teachers College, Columbia University, 1943).

[12] R. A. Greene, *A Comparative Study of the Efficiency of Dramatic Methods in Teaching Science to Fifth-grade Children* (Cornell University, 1937).

[13] F. Scott and G. C. Myers, "Children's Empty and Erroneous Concepts of the Commonplace," *Journal of Educational Research*, November 1923, pp. 327-34.

enters into the study of such community problems as sewage disposal, water supply, the control of communicable diseases, and proper protection of the food supply. The study of state and national problems also involves attention to the problem of health, since the strength of the state and the nation depends upon the conservation of human resources.

It is estimated that 75 per cent of the adults in this country are suffering from some form of malnutrition. In four southwestern states, only 24 per cent of the school children were found to have good diets; 23 per cent had fair ones, and 53 per cent had poor ones. Knowledge of food values, adequate income, and high production of food can help appreciably to produce a healthy America, provided that good eating habits are established early in life.

SAFETY. It has been estimated by the National Safety Council that more lives were lost during every year of World War II as a result of preventable accidents than were lost on the battlefields. The problem is primarily an educational one, and science education can contribute much to its solution. An understanding of scientific principles is closely related to the prevention of fires, reckless driving, household injuries, and other safety hazards. The need for safety education represents an important area in contemporary living in which the developments of science need to be made available to children to help them to adjust to the environment in which they live.

To teach health and safety effectively, the teacher must turn to the science fields for the concepts and attitudes she wants children to acquire. The safe use of bicycles, for example, requires some knowledge of the concept of friction; rules for riding the school bus are based partly upon the concept of inertia; knowing what to do when a person faints stems, in part, from an understanding of the concept of gravity. Bacteriology helps children to understand why they should stay home when they have an infectious disease; physics contributes to their safe operation of the seesaw. Without content drawn from science, the teaching of health and safety degenerates into the teaching of rules, the reasons for which are not clearly understood by children. And the scientific approach to health and safety is so persuasive as to promise significant changes in pupil behavior.[14]

THE ELIMINATION OF SUPERSTITIONS AND IGNORANT PRACTICES. In the past, science objectives have consisted largely of statements of specific facts to be learned from the study of science. Such objectives were frequently regarded as ends in themselves with little or no application to problems of living. Ample evidence that they did not function in the lives of children and youth is to be found in the persistence of superstitions and ignorant practices in an age when the findings of science are readily available.

[14] J. D. Barnard, C. B. Stendler, and B. Spock. *The Macmillan Science-Life Series* (Teachers edition, the Macmillan Co., 1959).

Examples of superstitions that have persisted from one generation to another, largely because the application of scientific principles to problems of living has been neglected, include the belief that thunderstorms will sour milk, that a bee sting will cure rheumatism, that breaking a mirror will bring seven years of bad luck, and that some crops must be planted only when the moon is full.

Closely related to these superstitions are the implicit confidence that many people have in the efficacy of certain patent medicines, faith in many get-rich-quick schemes, and prejudices against race and color founded in part on ignorance of scientific facts and principles.

It is not the intention here to suggest that the teacher should take these superstitions up one by one and teach children that they are not based on scientific facts. There is too much danger that such a procedure may lead to a conflict between what the child is taught at home and what he learns at school. What is being suggested here is that science teaching that involves firsthand experiences, experimentation, and observation will help the child build his own defenses against superstitions, prejudices, and false beliefs.

The objectives of education set forth by the Educational Policies Commission (see Chapter 4) include several abilities that science education can help to develop. These are:

1. *The Inquiring Mind.* The educated person has an appetite for learning.
2. *Health Knowledge.* The educated person understands the basic facts concerning health and disease.
3. *Home-making.* The educated person is skilled in home-making.
4. *Consumer Protection.* The educated consumer takes appropriate measures to safeguard his interests.
5. *Critical Judgment.* The educated citizen has defenses against propaganda.
6. *Social Applications of Science.* The educated citizen measures scientific advance by its contributions to the general welfare.
7. *Conservation.* The educated citizen has regard for the nation's resources.

Problem-solving behaviors

The problem-solving behaviors that children use as they work in science need special mention. Problem-solving as a method is not new in the elementary school. Teachers have used this approach for years in teaching many different subjects. But it is particularly important in science teaching for we want to keep children's curiosity alive; we want them to want to search for

answers and to discover that finding out about things through the use of their own powers of observation and thinking can be a very exciting experience. We also want them to form the habit of hypothesizing, of searching for evidence, of evaluating evidence, and of arriving at generalizations and changing preconceived notions of what is truth when the evidence disproves their hypotheses.

Consider the children in a third grade, who had been growing their own plants on the window ledge for Mother's Day gifts. The problems arose as to how the plants might be kept on the ledge, yet protected from the heat of the afternoon sun. One boy suggested that each plant might be sheltered with a black paper hood; a second thought that green might be cooler. Some children suggested the remaining colors in the spectrum, while others thought color would make no difference. How to settle the question? The teacher might have said, "No, white will reflect more of the sun's rays and will be the coolest." In fact, there are times when the learnings growing out of pupil solution would be so trivial that such a statement would be the best procedure. But in this case the teacher recognized an excellent opportunity for problem-solving and so she said, "How can we find out which color, if any, would be best to use?" The children suggested various ways to test their hypotheses and eventually an experiment was planned to measure the temperature under paper shelters of different color. When the evidence was in, they generalized from their data. Then the teacher helped them to see that, when the evidence is reliable, they must be prepared to change their minds, if need be. In ways such as this do children learn the behaviors important to them not only as future scientists but also as future citizens.

Science Objectives

Science education is included in the curriculum of the elementary school not as an end in itself but for the contributions it can make to the growth and development of children and to the welfare of society. The specific aim is to help the child acquire the scientific knowledge and procedures necessary for democratic citizenship and for effective adjustment to his natural environment.

The course of study in elementary science in the City of New York, 1954, is designed "to help our children":

1. Acquire a functional understanding of the nature of their relationships with their environment.
2. Grow in the ability to think clearly and logically, i.e., scientifically, and in the ability to distinguish fact from fancy, superstition from proven prin-

3. Solve problems and discover new facts by using the methods of science.

4. Gain experience, develop skills, and acquire confidence in the use of various methods of finding out. Experimenting, observing, reading, going on field trips, asking questions and consulting authorities, all help to round out and double check their findings.

5. Broaden their interests in the world about them and foster an appreciation of the rhythm and orderliness of natural phenomena.

6. Gain an appreciation of the potentialities of science for the improvement of human welfare and the dangers to civilization of its misuse.

7. Grow in those moral and spiritual values which exalt and refine the life of the individual and society.

8. Develop an abiding interest in science and scientific pursuits.[15]

Scope and Sequence in the Science Program

Providing adequate scope for the science program in an elementary school involves the selection of those understandings, skills, and attitudes that are most vital in helping children make satisfactory adjustments to the natural environment. It requires, also, the maintenance of a balance between what is socially and intellectually significant and what is interesting to children. Although the scope is determined to a large degree by the preparation, insight, and ingenuity of the teacher, the principal and the staff have the responsibility for continuous study and planning of the science program. Blough, Schwartz, and Huggett present a very convenient classification of the content of the elementary-school science program, as follows: The Earth and the Universe, Living Things, and Matter and Energy. Units suggested in the area of Earth and Universe include, Ancient Animals and Plants, The Earth and Its Surface, The Sun and the Planets, The Constellation and the Galaxies, and The Air and the Weather. Units suggested in the area of Living Things include, The Earth's Living Family, Living Things and the Seasons, Animal Ways, The Human Body and How It Works, and Conservation of Our Resources. Units suggested in the area of Matter and Energy include What Things Are Made of, Fire and Its Prevention, Heat and How We Use It, Atomic Energy and Its Uses, Machines and How They Work, Magnetism and Electricity, Sound and How We Use It, Light and How We Use It, and Aviation.[16]

Chapter 5 has presented principles for guiding the staff of an elementary school in determining the sequence of learning experiences. These same principles furnish guidance for the staff in planning the over-all design of

[15] Reprint from *Course of Study in Science for the Elementary Schools: Grades K-6*, by permission of the Board of Education of the City of New York.
[16] Glenn O. Blough, Julius Schwartz, and Albert J. Huggett, *Elementary-school Science and How to Teach it*. (Rev. ed., Henry Holt and Co., 1958).

the science program and for adapting it to the abilities, interests, and backgrounds of the particular group of children involved. An example of a science program that uses these principles is provided in the accompanying table.

A Sample Scope and Sequence Chart

Living Things	Matter and Energy	Earth and Universe
Kindergarten and Grades 1 and 2:		
How Plants and Animals Live	How Machines Help Us	Weather Changes
How Living Things Differ	How We Get Our Work Done	What We Know About Weather
Grades 3 and 4:		
How Plants and Animals Live and Grow	How Work Is Made Easier	What Makes Up the Earth's Surface
How We Group the Things about Us	How We Use Magnets	What Heavenly Bodies Can Be Seen at Night
What Living Things Need		What the Sun's Family Is Like
Grades 5 and 6:		
How Living Things Live Together	What Makes Things Move	Constellations and Galaxies
How Plants and Animals Are Made Useful	What Things Are Made of	Why Weather Changes
How Plant and Animal Bodies Differ	Why the Air Is Important	How the Earth's Surface Is Changed
What Rocks Tell Us about Plants and Animals	What Makes Sound	
	Common Uses of Electricity	
	How We Use Light	
Grades 7 and 8:		
How Scientists Work	The Nature of Material	The Kind of World We Live in
How Living Things Are Alike	Fire: Its Uses and Control	Conservation of Natural Resources
How Living Things Are Fitted to Their Habitat	How We Use Electromagnets	Do We Belong to the Milky Way?
Why We Need Different Kinds of Food	How We Control Heat	How the Surface Features of the Earth Are Made
How a Balanced Diet Is Maintained	Uses of Atomic Energy	What Makes Weather Change?
How Our Bodies Work	Aviation	
How Life Continues on Earth		

The sequence of science experiences must be the result of continuous, cooperative study and planning

The sequence of science experiences need not be either rigidly planned or completely planless. What is needed is continuous, cooperative planning by the local staff to keep the sequence of science experiences in harmony with the developmental needs of children. The sequence cannot be arrived at once and for all or at any given time. No school can borrow and use uncritically the sequence of science experiences used in another school. Rather, the leadership in the local school must provide the basis for planning the sequence of science experiences, opportunities for the study of the local environment and the characteristics and needs of the children living in that environment.

The sequence of science experiences must provide for continuity in learning

In accordance with the psychological principle that learning represents growth rather than the mere accumulation of knowledge and skills, science experiences in the modern elementary school follow the spiral system of grade placement rather than the ladder system. This means that, instead of taking up one area, such as "living things," in one grade and completing it before going on to another area, such as "the earth," in the next grade, attention is given to each area at all grade levels. These topics cannot be mastered once and for all at any one grade level. Instead, they must be planned so that the child moves gradually from what is familiar and concrete to what is remote and abstract; from what is simple to what is complex.

The sequence of science experiences must be flexible enough to permit the teacher to begin with children where they are

Although an outline such as that given above is helpful in providing continuity in the science program, we must remember that all children do not grow at the same rate in understanding the various aspects of the environment. Because of differences in ability, interest, attitudes, and the availability of materials in his environment, one child may be far ahead of another in one aspect, such as weather, but far behind in another aspect, such as the stars. Furthermore, children's interests do not reflect any artificial boundaries, such as physical science and biological science. There is no advantage, therefore, in arbitrarily assigning problems relating to the biological sciences to

Using the Discovery Method in Teaching Arithmetic

The teaching of arithmetic responded slowly to the changing curriculum. Until fairly recently primary children were introduced to members by learning to count and to write the number names to 100, while third-grade pupils drilled on the multiplication tables and intermediate-grade students memorized the rule for finding the lowest common denominator. Now, in the modern elementary school, in line with recommendations by mathematicians, emphasis is first placed upon the meaning of the number system before extensive computation is undertaken. In place of memorizing 1-2-3-4-5, beginners are helped to acquire the concept of one-ness, two-ness, three-ness, and so on. They learn that the concept may be expressed by a number name which may be represented in various ways: six-ness, for example, may be expressed as: 6; $4 + 2$; $3 + 3$; $7 - 1$; 2×3; etc. Adding, subtracting, multiplying, and dividing then became processes by which sub-groups within a number are manipulated. Post-beginners learn the meaning of an equation and are introduced to arithmetical principles. For pupils who have had several years of solving such equations as $3 + 5 = 2 + 2 + ?$ and $3 + (5 \times 1) = 2 + 2 + ?$, first-year algebra in junior high school holds no terrors.

Methods of teaching arithmetic have also changed. In the modern arithmetic curriculum, considerable use is made of the discovery method; that is, of so structuring the teaching-learning situation that pupils themselves find out basic principles and devise rules for solving problems. This is done by having pupils use concrete materials—as the children in this picture are doing—to express the number facts in a given problem, and to manipulate the materials to find an answer. In learning to work with fractions, for example, it is not difficult for pupils to arrive at the rule for finding fraction equivalents if they have available wooden rods, or strips of cardboard, or disks, cut into fractional parts.

The teaching steps in the discovery method include: presentation of a meaningful problem by the teacher; manipulation of concrete materials by the pupils; discovery of solution by pupils; solution of similar problems; generalizing about the solution and formulating the rule; application of the rule under supervision. Once the meaning of the operation is clear, there must be adequate drill so that future problems can be solved quickly and accurately.

The discovery method is not a passing fad. It is based upon a considerable amount of research which shows that this method pays dividends in the long run. Teachers using it can expect that there will be a longer time before actual computation begins, but they can also be sure that the learning will be more meaningful and more permanent.

© (Photo: Henry G. Bockstaber, Art Supervisor; courtesy Ridgewood Public Schools)

Seeds

Red
red

Look, look!
See the seeds
Seeds go up
Seeds
They go

Teaching Children the Methods of Science

In its science curriculum, the traditional school has emphasized the content of science, teaching children the concepts and principles discovered by man through the ages. The modern school also emphasizes content but includes in addition emphasis upon the methods of science, for scientists today are agreed that both components are important to science education. They are also agreed that there is nothing esoteric about these methods; they are the common-sense ways familiar to all of us, of tackling problems.

The scientist begins by being curious about a problem—for curiosity is one of his bench marks—and by hypothesizing solutions to the problem. He tests his hypotheses by controlled experiments and evaluates results before coming to a conclusion. To train children in scientific methods means, then, to encourage curiosity, hypothesizing, and testing hypotheses under controlled conditions.

The drawing above illustrates an approach used by one teacher to train children in the methods of science. He prepared a bottle with a layer of sand, live aquatic plants and animals, sealed the jar with a stopper and sealing wax, and displayed the bottle in the classroom. The pupils were fascinated by the sight of goldfish swimming about in lively fashion in a sealed bottle. Questions came thick and fast and were written on the blackboard: How long can the fish live sealed in the bottle? How does the fish get more air over a period of time? Why doesn't the fish starve? Does the fish eat the snails? Do plants need air to keep alive? Is air necessary for water forms of life?

After several days (during which the pupils began to lay bets on how

long the goldfish would live), the teacher began science class by referring to the questions on the board and countering them with the question, "What does a fish do to maintain itself when not sealed in a bottle?" The suggestions offered by the class, which were in reality an analysis of the problem, included such statements as: It must breathe; It must eat; It must get rid of wastes; It must avoid enemies; It must avoid very unfavorable conditions of its environment. The class saw that if all of these conditions could be maintained in the sealed bottle the fish could live indefinitely.

For each of the conditions necessary for life, the pupils proposed hypotheses directly related to the goldfish in the sealed container. Some of the hypotheses proposed to explain how the fish was able to breathe were:

1. Water has oxygen in it; fish breathe water and can get oxygen in this way.

2. Sunlight acting on water forms oxygen.

3. Only air-breathing animals use oxygen.

4. There is a very slow passage of air through the glass of the bottle which is sufficient to replace that used in the fish.

5. Minerals in the sand dissolve in the water, giving off oxygen to the air and water.

6. The plants give off enough oxygen for the fish to live, and use up the carbon dioxide that the fish give off.

Similar lists of hypotheses were prepared for the other conditions necessary for the maintenance of life. Each hypothesis was discussed and some discarded as not worth testing. Hypotheses that provoked considerable argument were retained and the pupils devised experiments to test each one separately. To test Hypothesis 1 for example, three pint-size and three quart-size fruit jars with self-sealing lids were procured and 1 pint of water added to each jar. In the water of each jar were placed two small goldfish. The jars were then all sealed tightly and set on a table. This was done early in the morning and by 3.00 P.M. the pint jars contained four dead fish and two that were apparently nearly suffocated. The three quart jars, half-filled with water and half-filled with air, contained six fish that seemed to be in a normal condition. Two of these quart jars were kept closed and the third was opened and all were left until the following day. At that time all the fish in the closed jars were dead while those in the one that had been left open were alive. The class accepted this experiment as sufficient evidence that air is a vital factor in respiration of fish and that fish do not breathe water alone.

Teaching methods like these unquestionably foster the development of those intellectual skills needed by laymen as well as scientists. In the several weeks in which they pursued their study, pupils learned to question, to observe carefully, to keep accurate records, to keep an open mind, to challenge each other's statements, to test rigorously, and to evaluate evidence. The methods of inquiry that they practiced are just as appropriate to use in solving problems of everyday living.

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eyes watched the girls place the burning paper at the bottom of the bottle and quickly put the peeled egg at the top of the bottle. The egg fell to the bottom of the bottle with a loud "pop." Why was the egg pushed into the bottle? Most of the air inside the bottle was expanded by the heat and pushed out. . . . The contracted air inside had less pressure than the air outside. Air pressure pushed the egg in the bottle. Now the egg was inside. Could they get it out? How? Patty turned to bottle upside down and shook the egg into the neck of the bottle. She put the opening of the bottle close to her lips and blew hard into it. The air pressure pushed the egg out.

Another experiment was performed to show how air exerts pressure. This involved the use of a metal gallon can with stopper, a small amount of water, and some heat. Gilbert put the water in the can and placed the can over the fire. He made certain the hole in the can was open. As the water boiled and the steam came out, it pushed most of the air out of the can. When the steam was coming out fast, Gilbert took the can away from the fire and put a stopper in the hole. He set it aside to cool. As the can cooled, the steam condensed and turned back into water. Since the can was stoppered, no air could enter, and a partial vacuum was created in the can. A low air pressure was inside the can, while the pressure outside was much greater. The higher pressure outside pressed against the sides of the can and pushed them in. Enthusiasm grew by leaps and bounds. Many other experiments were performed to understand the importance of atmosphere in the flight of planes. A new world was opened to them as they did experiments to show the following scientific facts:

> that air is present everywhere,
> that air occupies space,
> that air (exerts) pressure upon things,
> and that air expands when heated.[17]

So that the reader may get the flavor of a primary classroom in action, the following report is included:[18]

Eight-year-olds Measure Temperature

by Lois Knowles

Experiences in science often grow out of work in other fields. A group in the University of Missouri Laboratory School was discussing pasteurization of milk as part of its social studies. One boy reported that in the process milk is heated to 150°. Another challenged him with a textbook reference that clearly said 145°. In reconciling this difference (either temperature is adequate), other questions came up. One was, "How hot is 145° or 150° F.?" Some thought boiling, others thought not. One child who has special interest and ability in science observed that it might be for some liquids, but he thought not for milk. No one was sure.

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[17] Evens Newland, "Fly American," *Progressive Education*, April 1943, pp. 166–71.

[18] From Herbert S. Zim, *This Is Science* (Association for Childhood Education, 1945), pp. 17–18.

"How could we find out?"

"My mother has a cooking thermometer. We could have an experiment if we had a cooking thermometer."

A cooking thermometer was promised for an experiment next day and in the meantime some other temperatures were secured as a basis for comparison. "What is the temperature in the room now?" "What is the temperature outside now?" "Can you remember what it was during some of the hottest days last summer?" "What is it during our coldest winter nights?"

The school nurse arrived at this opportune moment and everyone wanted a temperature check to determine body temperature. Ninety-eight and ninety-nine degrees meant something to them now. While taking temperatures, the nurse answered some of their questions about body temperatures. "How high can one's temperature go and the person still live?" "Does it ever go below 98°?" "Do animals have the same body temperatures as we have?" "What is the body temperature of snakes?"

The next day a hot plate, a cooking thermometer, and a beaker of tap water were assembled on the science table. The temperature of the water from the tap was found to be less than that of body and room temperature. Then the water, with the thermometer remaining in it, was placed on the hot plate. The children watched with interest as the mercury climbed. At 145° F. it was definitely hot to the touch but there were no bubbles to indicate boiling.

"Let's see how hot it is when it really boils." The mercury continued to rise. As the water began to boil rapidly, eyes were glued to the thermometer. At 212° F. the mercury stopped rising. The boiling point of water was "discovered."

Such questions as the following led to further observation, reading, and experiments. "Why does the mercury go up when it gets hot?" "Could we make it go higher than 212° F.? How?" "How low could we make it go?" "Why does the pasteurizing process just take the milk to 145° F. and then stop?" "What does the F. mean on the thermometer?" "Is anything besides mercury ever used in the thermometers? I've seen red ones." "Isn't there another kind of thermometer that is used in laboratories? How is it different?"

The following activities were carried out on subsequent days·

Pasteurized a sample of fresh raw milk by heating it to 145° F. and holding this heat for thirty minutes.

Found the melting point of ice (and freezing point of water). Mixed equal quantities by weight of snow and salt and watched the mercury fall to "zero!" "That's how we freeze ice cream!"

Kept an outside temperature chart, making daily recordings for a week. Consulted newspaper weather reports for local temperature readings. Located and read material about temperature in science books. Discovered how a thermometer works. Used a flask, glass tubing, and water colored with red ink to show expansion when heated.

Several days after the experiments with temperature these good questions were asked:

"It says here that mercury freezes at −39° C. What liquid was in the

thermometers used by explorers at the poles? Doesn't it get colder than that there?"

"If it is heat that causes expansion, why does milk expand and push up the bottle-top when it freezes?"

Activities such as those described here stimulate children and encourage questions and answers which help to clarify concepts for the whole group. Of course, not all of our problems are solved by experimentation, but a scientific attitude is developed along with basic understandings. Children who have the opportunity of discovering things for themselves experience a real joy in learning.

SUGGESTIONS FOR THE ELEMENTARY TEACHER WHO IS NOT A SPECIALIST IN SCIENCE. One reason for the relative neglect of science teaching in the elementary school is that elementary-school teachers feel they do not know enough about the content of science to teach it to children. It is true that teachers need special preparation in college for the job of teaching science. The science courses for prospective elementary-school teachers should make clear the social functions of science, should devote a considerable amount of time to field and laboratory activities, and should give attention to the care and handling of living plants and animals. They should provide for breadth of understanding in all areas of science instead of specialization in a limited field. Until courses in the teaching of science become broader and more generally available, however, science will have to be taught by many teachers who have had inadequate preparation. Blough, Schwartz, and Huggett offer the following practical suggestions to teachers who may feel hesitant about undertaking the teaching of science:

1. Read science material both on the children's level and on your own—such as this book. Keep it on your desk for ready reference. . . .

2. Do some of the "things to do" that this book and others suggest, such as "going to see," observing, collecting. After you get started you may be surprised at your own enthusiasm. . . .

3. Do some of the experiments yourself. They are not difficult, and many of them are very interesting. They make it real. . . .

4. Find a junior high school science teacher and ask his help. It will do each of you good to know what the other is doing. You can exchange ideas and make use of each other's background. . . .

5. Find out whether your state, county, or city has a course of study or bulletin on the teaching of science. It may be published under separate cover or as part of a bulletin on the total elementary school curriculum. In either case it is bound to be full of teaching ideas. . . .

6. Be sure to order the teacher's manuals that go with the textbooks used in your school. They are good sources of help that are often overlooked.

7. Watch current periodicals and other publications for articles about science teaching.

8. Try to arrange to watch another teacher working with children and science. You may get many good ideas in this way.

9. Avail yourself of any opportunity provided in your school to attend workshops, extension courses, or other projects that can better equip you to teach science.

10. Be open-minded in your approach to the teaching of science.[19]

Evaluation of Pupil Progress

The philosophy of science teaching in the modern elementary school is shifting away from an approach that emphasizes only mastery of content to one that places considerable emphasis upon the development of scientific attitudes and methods. Similarly, the emphasis in evaluation of pupil progress in science is shifting away from the exact measurement of the mastery of content toward an effort to evaluate progress toward the achievement of the broader objectives of science education. A review of the objectives of science in the elementary school listed earlier in the chapter will reveal that evaluation in terms of these objectives is far more complicated than merely measuring the degree to which pupils have mastered the content in a given area. Factual knowledge as a basis for intelligent behavior is more important today than ever before, but evaluation in terms of the broader objectives of the science program involves not only an accumulation of data regarding the information pupils can recall but also procedures for evaluating growth in understanding, attitudes, and skills. Paper-and-pencil tests may suffice for measuring pupil progress in terms of factual knowledge, but the evaluation of pupil behavior in actual situations involves the use of other instruments and procedures.

The following procedures are commonly used to evaluate pupil progress in science:

Essay-type examinations

These tests have some value in the evaluation of science understanding in the upper grades. The questions should be simple, clear, and specific and should be designed to test the child's comprehension of principles and his ability to apply the information to actual situations.

Objective tests

Teachers should be able to construct several types of objective tests designed to measure the ability to use knowledge in the solution of problems and to apply scientific principles to life situations.

[19] Glenn O. Blough, *et al*, *op. cit.*, p. 5.

Problem-situation tests

These tests confront the pupil with an actual situation and expect him to decide upon an intelligent course of action in terms of the information provided. They are well adapted to the science program because they test the ability to evaluate data, to apply given facts to the solution of a problem, and to check judgments against evidence.

Observation of pupil behavior

More can be learned about the interests, attitudes, and behavior patterns of children through daily systematic observation than through paper-and-pencil tests. Teacher observation handled systematically in terms of clearly defined objectives can be very useful in evaluating the growth of children in the area of science. The methods of making systematic observation of pupils are discussed in Chapter 14.

Forms for recording observations of pupil behavior relating to the objectives of the science program are intended to provide answers to questions such as the following:

Is the child improving in his ability to attack a problem and solve it satisfactorily?

Is he becoming more capable of taking responsibility for carrying out plans?

Is he improving in his ability to approach a discussion with an open mind?

Is he critical of his own ideas and those of others?

Is he improving in the ability to withhold a decision until sufficient evidence has been obtained?

Other methods of evaluation

Samples of the child's work both at home and at school, self-rating scales, case studies, and interviews all have their place in a comprehensive program of evaluation.

Improvements Needed in Elementary Science

The successful launching of the first earth satellite by the Russians in the autumn of 1957 created grave concern on the part of American citizens regarding the progress of this nation in the realm of science and technology.

The event gave a new impetus to a movement already under way—the demand for a reappraisal of the program of the public school. Critics of education were eager to point out that, by trying to teach all American children, the schools had fostered anti-intellectualism, lowered standards, and undermined the security of the nation.

The Russian system of education, which emphasizes mathematics and science and minimizes other subjects taught in our schools, has been given a great deal of attention. The achievements of our children and youth have been compared unfavorably with those in the schools of various European countries, where the emphasis has been on the selection of the most capable pupils for thorough training in the fundamentals.

This does not mean that everyone who has studied the situation is convinced that we should abandon our program for the education of democratic citizens and copy the program of Russia or of some other country. Indeed, many voices are being raised in favor of a well-balanced program of education, including science and mathematics. There is evidence, also, that the highly selective system of education in some countries is meeting with an increasing amount of opposition.[20]

Improvements are obviously needed in the elementary science program. A study of subject preferences of 13,483 fifth-grade pupils revealed that the boys ranked science sixth out of ten elementary-school subjects and that girls ranked it seventh. The same study found that 543 teachers ranked science eighth out of ten elementary-school subjects when asked to list their favorite subjects.[21]

A recent article points out certain changes that can be made so that science can perform a better service both for society and for children.

> *We can give elementary science the same status as other subjects.* One way to do this is to set up a series of science experiences which progress in difficulty of concept from grade to grade. This is already done in several available science textbook series. Let us make these books available to children. While we are using the present texts, let us find ways to make better ones.
> *We can provide experiences with actual scientific equipment.* This does not mean that the simple materials from the child's environment are to be forgotten. But meters, microscopes, aquaria and other apparatus cannot all be improvised. We learn science by handling the tools of science. Let us provide these tools for children.
> *We can supply the classroom teacher with a fund of petty cash for science equipment and supplies.* A lot of good science is taught in American schools only because it is underwritten by dedicated teachers. Too fre-

[20] See Joel Montague, Jr., "The 'Eleven-Plus' Battle in Education in England," *The Clearing House*, January 1958, pp. 259–62.
[21] W. Linwood Chase, "Subject Preferences of Fifth-Grade Children," *Elementary School Journal*, December 1949, pp. 204–211.

quently the teacher buys the dry cells, the wire, the balloons, and a host of other "easily obtained" things because the process for getting them thru the channels of the school office is too complex, too time-consuming, or downright embarrassing. Some of the dollar-a-year-per-pupil which should be appropriated for science supplies should be available to the teacher for those science materials needed for an exciting project at the exact time that the interest is highest.

We can emphasize that *science is measurement.* To watch an electromagnet pick up tacks is an observation. To measure the effect of increasing the number of turns in the coil can lead to a generalization of far-reaching importance. Measurements should be made in the metric system whenever it is possible to do so. By the time he reaches high school every American child can be versed in this system of measurement common to the sciences and to a good part of the civilized world in its ordinary commerce.

We can *tie arithmetic in with science.* One function of the scientist is to establish relationships. Some of the simple relationships are expressed in numbers—the more involved ones need mathematical equations. We can begin early to show the inherent dependence of science on mathematics.

We can *help teachers prepare science lessons thru in-service workshops.* Such workshops should be run by good science teachers with both a flair for science knowledge and a feeling for children. Many teachers who had no elementary science themselves just do not realize what a "shot in the arm" a good science program can be.

We can *provide science consultants.* People like this can help to assemble materials, get information, help with the science concepts and in numerous other ways provide stimulating science class experiences. These consultants must be prepared in greater numbers by our colleges. They must be people who believe that elementary science is just as important to the country as the production of guided missiles or bobby pins or pure research in any of the formal sciences. They must feel that, by and large, the citizenry thinks so too.

We can *call on child development specialists to keep watch on the science program.* The use of these specialists can help us to be sure that the needs of children are served, that potential abilities are not squandered, but that impossible tasks are not forced on children in the name of the new Golden Calf.

We can *take another look at science fairs and congresses.* For instance, we should ask ourselves:
- To what extent are the projects presented truly scientific in tone and in implementation?
- Are we letting children get awards for projects thrown together the night before the fair?
- Are we using the science fair to judge teachers' rather than children's scientific creativity?
- Are we giving science awards to projects which are merely pleasant displays or hobby shows?
- Are we wasting time building displays which teach nothing besides giving a false impression of what scientific investigation means?

We can *talk to children's librarians* and to bookmen to find out what

supplementary books are available in the sciences. We can make a judicious choice from among these science books written especially for children and have them at hand so that children can readily use them. We can ask teachers to spend some time browsing in this children's science literature so that they will know the right book for a particular child at the time when the book will make a significant difference in the child's outlook on science.

We can carry out some research on the available science books for children. For instance we should be asking ourselves questions such as these:

- Which science books attract children? Why?
- How much do children retain from their reading?
- To what extent do the books actually stimulate further reading, discussion and experimentation?

We can plan more science experiences of the problem-solving type. Within the problem-solving situation children can then be made aware of the many facets of scientific thinking. They can learn to recognize an assumption, a hypothesis, a theory, a partial generalization. They can learn that there is no one "scientific method" but only "doing one's damdest with one's brains, no holds barred"—and find it stimulating fun.

We can suggest some kinds of science experimentation to be carried out at home. Parents must be made aware of the science program and what we are trying to do with it. When a parent thinks that his child is not reading well, he comes to school and asks, "How is Johnny doing in reading?" No one ever asks, "How is Johnny or Jane doing in science?"

If the day should come when a parent does ask it, we can be ready to say, "Why, just fine. He likes it. He works hard at it. He is learning a lot. Even if he never turns out to be a practicing scientist—and a lot of people don't, you know—he will know how to judge worthwhile science when he sees it. It's funny, but a child can learn a lot of science and be well-adjusted at the same time. Of course, this is true for some adults who pursue science for a living, isn't it?"

Let's get on with up-grading science. It will be a valuable contribution to American life.[22]

Summary

1. It is dangerous to limit scientific information to a selected few, leaving the majority of people in the position of living in an age of science *without the ability to understand or control it.*

2. The school program should provide opportunities for all children to understand to the greatest extent possible how science influences the life of every human being.

3. The science program in the modern elementary school is based on what is known about the characteristics and needs of children, social needs, and the objectives of education.

[22] Nelson F. Beeler, "Next Steps in Elementary Science," *The National Elementary Principal*, April 1958, pp. 8–11. Reprinted with permission of the publishers.

4. The science program is concerned primarily with developing the child's intelligence regarding the place of science in personal and social life, and only incidentally with discovering children with exceptional ability in science and starting them on their way to becoming great scientists.

5. Providing adequate scope for the science program involves (a) the selection of understanding, skills and attitudes that are most vital in helping children make satisfactory adjustments to the natural environment, (b) the maintenance of a balance between what is socially significant and what is interesting to children, and (c) a decision on how much use to make of books on the one hand, and of other information sources, including the local community, on the other.

6. The sequence of science experiences must (a) be the result of continuous, cooperative study and planning, (b) provide for continuity in learning, and (c) be flexible enough to permit the teacher to approach each child at his own maturity level.

7. The science program can be a joyous quest not only for the children but for the teacher as well if the teacher brings to the task an understanding of children, a broad knowledge of factual science materials, and a willingness to let children observe, experiment, and read to find answers to their many questions.

8. Pupil progress in science may be evaluated through the use of (a) essay-type examinations, (b) objective tests, (c) problem-situation tests, and through the (d) observation of pupil behavior.

SOME PROBLEMS AND PROJECTS

1. The fourth-grade teacher at Leighton School is just a little afraid to do any more demonstration or experimentation with her class. One day she had attempted to demonstrate that air can hold up a column of water. She filled a glass with water, slipped a piece of cardboard over the top, turned it upside down, and took her hand away. According to the book, the water should have remained in the glass because of the pressure of air against the cardboard. But, to the teacher's chagrin and the class's delight, the cardboard fell and the water spilled all over the teacher's skirt, stockings, and shoes. She hastily closed the incident with the remark, "Well, that didn't work," and went on with the rest of the lesson.

Can a demonstration or an experiment that does not work be of educational benefit to the class? How can the teacher use it to best advantage?

What hypotheses might the children have advanced as to why the water fell out of the glass? How could they have tested these hypotheses?

2. How should experiments be handled in the classroom? Should the teacher perform the experiments herself? Should she have pupils come up one at a time to pour the water, slip the cardboard over the top, and so on? How might a teacher use a committee form of organization to get full participation in conducting experiments?

3. There are two ways of conducting science activities with children. One is to do a demonstration of a principle you have taught—to prove in a dramatic way that the generalization you have propounded is true. The other way is to have children do experiments to test hypotheses or hunches that they have proposed in connection with a science problem.

According to the first method, the teacher teaches the principle that when air is heated it expands and then demonstrates the truth of this principle by an activity. According to the second method, the children are faced with the problem "What happens to air when it expands?" and in order to answer this question they propose several possible solutions, which are tested by experimentation.

Is one way better than the other? Does one way encourage scientific thinking to a greater extent than the other? Is there a place for both methods in science teaching?

4. Mr. Muzzee is teaching a unit on the origin of the earth. His pupils have read several different theories concerning the earth's origins. One pupil says, during a discussion, "But in Sunday School I read that God made the earth and the whole business only took a week."

Which of the following is the best response for Mr. Muzzee to make? Why?

"We can't go into that right now. When you're older, your teacher will discuss the differences in the two positions."

"Yes, the Bible says God made the earth. In our science class we don't discuss who made the earth but rather we study how it might possibly have been made."

"Many people believe now that the Bible is simply a collection of folk tales, and in science we've gone way beyond that."

5. Sam Wade in grade 4 has warts. Jim Hendricks proposes a cure. He says to bury a bean, half-covered with blood from the wart, at a crossroads at

midnight in the dark of the moon. He says he read about the cure in The Adventures of Tom Sawyer.

Is there an opportunity for science learnings in such a situation? What might the teacher do?

6. On page 298 are listed three plans for including science instruction in the elementary school. Which of the three do you favor, and why? Does the science plan of your choice necessarily exclude the others? Explain your answer.

7. A sixth-grade class is beginning a study of how its community is supplied with water. The pupils are drawing up a list of problems for study. "We ought to find out about the stuff you put in the water supply so kids won't get cavities," one boy proposes. "I think you call it sodium fluorides."

This suggestion creates a dilemma for the teacher. She knows that in a neighboring community there has been considerable opposition to fluoridation of the water and that fluoridation is very likely to be opposed in her own community.

What should the teacher do in such a situation? Should she avoid the problem? Give it a very minor place in the unit? Encourage pupils to collect evidence on fluoridation and study objections to it?

8. Mrs. Blackburn has planned a number of science experiences for her second-grade group. She has them begin in the fall by collecting leaves, which they wax and press in order to preserve. Then the class discusses changes that come with winter and each pupil makes cut-paper snowflakes. They collect samples of evergreen branches and identify them. In the spring each pupil learns to identify five birds and five spring flowers. They also learn how animals adapt themselves to changing seasons.

Evaluate Mrs. Blackburn's program in terms of the science objectives discussed in this chapter. What recommendations for improving the program would you make in the light of these objectives?

9. One of the newer emphases in elementary-science teaching is the stress upon the relationship between science and mathematics. This does not mean the correlation of arithmetic and science in vogue years ago, but rather an emphasis upon using mathematics as the scientist does—as a tool for distcovering truths about the universe. The essential difference between the practice of correlating arithmetic with science and the practice of using mathematics to discover basic principles is that the former is used to give the children practice in computation, whereas the latter is used to give children training in working as a scientist does. Under correlation, children might

figure out the cost of materials needed to make an electromagnet. Such an activity contributes nothing to science, however, and little to arithmetic. On the other hand, when mathematics is used as a tool to discover basic principles, children count the number of coils in two wires of different lengths and then measure the weight of the object each electromagnet can pick up. This provides the kind of training important to scientists—and to other citizens as well.

Here are some science problems that are studied rather widely in the elementary school. Suggest an experiment to be conducted to solve each problem and show how mathematics can be used in connection with each activity to help children discover basic principles.

a. Do people differ in their reaction time?

b. Does it take longer to stop a bike that is going fast than one that is going slowly?

c. Do layers of clothing keep one warmer than a single layer of heavy clothing?

d. What happens to air when it is heated?

SELECTED READINGS

BLOUGH, GLENN O., SCHWARTZ, JULIUS, and HUGGETT, ALBERT J., *Elementary-School Science and How to Teach It* (rev. ed., Henry Holt and Co., 1958). Outlines the content to be taught in four important areas and gives suggestions for teaching each area.

BURNETT, R. WILL, *Teaching Science in the Elementary School* (Rinehart & Co., 1953). An up-to-date treatment of science in the elementary school.

CLEVELAND PUBLIC SCHOOLS, *Science Experiments* (Cleveland, Ohio, 1957). Two bulletins containing descriptions of science experiments suitable for children in grades 1–6.

CRAIG, GERALD S., *Science for the Elementary-School Teacher* (rev. ed., Ginn & Co., 1958). Suggests topics, experiments, and meanings designed for children. Provides material that gives teachers an excellent background for teaching science.

——, *Teaching Science in the Elementary Schools* (State Teachers College, Kutztown, Pa., 1956). Number 12 of a series, "What Does Research Say to the Teacher," jointly prepared by the Department of Classroom Teachers and the American Educational Research Association.

ELEMENTARY SCIENCE COMMITTEE, *Elementary School Science Bulletin* (National Science Teachers Association, National Education Association, published eight times a year, October through May). Contains valuable suggestions concerning units of work, earth-moon-satellite relationships, and science fairs.

FREEMAN, KENNETH, and OTHERS, *Helping Children Understand Science* (John C. Winston Co., 1954). A very valuable book for both pre-service and in-service teachers.

NEBRASKA STATE DEPARTMENT OF EDUCATION, *Science for Nebraska School Children* (Lincoln, Neb., 1956). Contains suggestions for teaching science in grades 1–6.

SAINT LOUIS PUBLIC SCHOOLS, *Science for Elementary Schools* (St. Louis, Mo., 1954). Contains suggestions for teaching science in the kindergarten through grade 8.

UNIVERSITY SCHOOL, *The School Out-of-Doors* (College of Education, University of Oklahoma, Norman, Okla., 1958). Describes a project of the faculty and seventh- and eighth-grade students at the University School. More than a dozen university faculty members and other specialists in science and related fields acted as consultants.

ZIM, HERBERT S., "Incidental Science in the Classroom," *Science Teacher*, February 1952, pp. 17–19. Elementary science includes both an organized curriculum and the use of the incidental learning situation. This article describes how the latter emphasizes the interests of pupils and results in purposeful activities.

SELECTED FILMS

The following represent only a few of the films that are available on the subject of elementary-school science. One film company alone lists 28 films for the primary grades and 57 for the intermediate grades. The teacher should consult the nearest distributor of audio-visual materials for suggestions regarding films and film strips.

Animals and Their Foods. An 11-minute sound film illustrating the basic concept that different animals are suited to eating different kinds of foods. Coronet Films.

Animals and Their Homes. An 11-minute sound film showing the materials used by various types of animals in building their homes. Coronet Films.

Conservation of Natural Resources. A 20-minute sound film dealing with the conservation of water power, forests, and farm lands. Encyclopaedia Britannica Films.

How Weather is Forecast. An 11-minute sound film showing the operation of a weather forecasting station. The importance of forecasting to farmers, airplane pilots, fishermen, and others is stressed. Coronet Films.

How Machines and Tools Help Us. An 11-minute sound film explaining how machines and tools make work easier. Coronet Films.

How Plants Help Us. An 11-minute sound film showing how people are dependent upon plants for food, clothing, and other things that are important in their daily lives. Coronet Films.

Science and Superstition. An 11-minute sound film showing how pupils use the scientific method to prove that superstitions about the ground hog, rabbit's foot, etc., are inaccurate. Coronet Films.

□ Good health is a state of physical, mental, and social well-being. It is more than merely the absence of disease or infirmity; it is the foundation for joyous, zestful living. The child with good health is happier, better adjusted socially, and able to do better work in school than the child whose health is poor. Thus, health is not primarily an end in itself but a means to more effective living and learning.

Mental and physical health are in reality only two aspects of the same thing. The child who has good health is the one who has an abundance of energy, whose body organs are functioning efficiently, who is mentally alert and emotionally stable, and who is able to bring all of his resources to bear upon the problems with which he is dealing. The school, therefore, cannot avoid being concerned about the child's health and about the factors that are influencing it if it is to be intelligent about educating the whole child. Our society has repeatedly affirmed its belief in the dignity and worth of the individual. The home, the school, and the community can do much to make this basic tenet of democracy a reality by providing adequate facilities for healthful living for all children.

Healthful Living— Health and Physical Education

A sound mind in a sound body is a short but full description of a happy state in this world. He that has these two has little else to wish for, and he that wants either of them will be little the better for anything else.—JOHN LOCKE

Objectives of the School Health Program

School health programs are concerned with the general problem of conservation of human resources. It has long been recognized that good health is the principal source of individual happiness and national strength. The general objective of the health program in an elementary school is to help boys and girls become increasingly capable of making intelligent decisions about their own health problems and those of the community, state, and nation. Because every aspect of the school program influences the health of children, it is essential that every member of the staff understands the objectives of the school health program and assumes some responsibility for contributing to the achievement of these objectives.

The specific objectives of the health program will vary from one school to another, but the following list illustrates the type of objectives generally accepted:

1. To provide children with basic information that will help them conserve and improve their own health;

2. To help boys and girls develop habits of healthful living while in school which will enable them to maintain in later life that abundant vigor and vitality necessary for happiness and service in personal, family, and community life;

3. To help boys and girls assume increasing responsibility for their own personal appearance;

4. To help boys and girls learn how to protect themselves and others from communicable diseases;

5. To help children develop the ability to recognize quackery and nostrums in the field of health, to refrain from purchasing drugs or cures of unknown value, and to use dependable resources for medical care;

6. To teach the common rules for prevention of accidents and how to administer first aid when necessary;

7. To encourage children to take increasing responsibility for planning and eating meals that are adequate in every respect;

8. To teach how to plan a well-balanced daily schedule of work, play, rest, relaxation, and social activity;

9. To create a desire to participate in school and community efforts for health improvement;

10. To help children read selectively and understandingly in the field of health;

11. To help children accept their own limitations and capitalize on their strong points;

12. To help children understand the importance of correct posture, suitable clothing, and personal hygiene.

Essential Features of a School Health Program

A satisfactory school health program includes a healthful school environment, adequate school health services, a functional program of health instruction, and a systematic program of physical education. The development of a unified school health program, involving all of these phases, requires a great deal of study and planning on the part of the school staff, local physicians, social workers, community health agencies, parents, and other interested citizens.

The organization, personnel, and administration of the school health program vary from one school system to another. However, certain features are common to most well-organized and well-administered programs:

1. The health program is closely geared to the health problems and resources of the community.

2. The school staff has a clear concept of the relation of health to the educative process.

3. Health instruction is not left to chance. A definite period is set aside for health instruction in class schedules, at least in the grades above the third, and health is integrated with other school subjects.

4. The physical plant of the school is planned, constructed, and maintained with a view to fostering healthful living.

5. Physical education is an integral part of the curriculum rather than merely an extracurricular activity.

6. There is proper coordination of the several phases of the health program. For example, health aspects of physical education are emphasized and immunizations and physical examinations are utilized as educative experiences.

7. Adequate facilities and materials are provided for health and physical-education programs.

8. School health policies are definitely established and made available to the school staff and to parents.

9. There is effective coordination of school and community health programs.

10. Qualified medical advisers, nurses, health educators, school psychologists, and other specialized health personnel are provided either by the school system or in cooperation with city, county, or state agencies.

11. The school environment is free from accident and fire hazards, is sanitary, and is adaptable to pupil use.

12. The lunchroom is used as a laboratory for nutrition education, and not only as a place for dispensing food.

13. There are definite provisions for fostering the physical and mental health of employed personnel.

14. Teamwork on the part of school and community personnel permeates the health program.

15. Specialized health personnel are selected with due consideration for the adequacy of their training and other qualifications for the work.

A Healthful School Environment

Education is a process of interaction involving the learner and his environment. The environment and the way the child responds to it from day to day determine the direction his growth will take. Because children are required by law to attend school, it should be a place designed to serve their legitimate needs. If the school environment is drab, unattractive, and unsanitary, the child's physical, social, and intellectual growth will be limited. The school cannot, of course, control all the environmental factors that affect the child, but it should make this "little piece of the child's universe" as safe, sanitary, comfortable, attractive, and functional as possible.

Various phases of the school environment have already been discussed in Chapter 6. It is the purpose of this section to call attention to some important aspects of the physical environment in the elementary school.

The relationship between the physical plant of the school and the mental and physical health of its occupants is now widely recognized. The American Association of School Administrators states, "Educational growth of children to the fullest potential cannot be achieved unless every aspect of the physical environment is so controlled that it contributes to the comfort and health of the pupils and professional staff." [1]

The school site

The site should be centrally located with respect to the community served; should be free from heavy traffic, noise, and smoke; should be well drained; and should have attractive surroundings. The space should be ample for a modern school program—not less than five acres of ground, and preferably ten.

Functional units

The Educational Policies Commission recommends that the maximum enrollment of an elementary school be five hundred pupils. The functional

[1] American Association of School Administrators, *Health In Schools* (National Education Association, 1951), *p. 89.*

units of a school plant to accommodate an enrollment of that size should include, in addition to classrooms, an administration unit consisting of the principal's office, a clothes closet, a lavatory, a reception room, a storage room, and a conference room. There should be a health unit consisting of office space for the physician and nurse and isolation and rest rooms for children. Other units that are needed include an auditorium large enough to accommodate the school personnel as well as visitors; a gymnasium equipped with shower rooms, locker rooms, and lavatories; a cafeteria; a library; a custodian's unit; a heating-and-ventilating unit; and adequate toilet rooms. It is recommended that classrooms for the primary grades include toilets and lavatories and that toilets and lavatories for the other grades be sufficient in number and conveniently located.

Construction

Important considerations relating to the construction of the building include fireproofing, ventilation, heating, lighting, acoustics, and seating. Standards and check lists regarding these items can usually be obtained from the state department of education or the state health department.

The modern classroom

Classrooms in the elementary-school building should be planned to fit the type of program to be carried on in them instead of making the program conform to the limitations of the classroom, as is frequently the case. It is desirable that all classrooms on the ground floor have exits directly to the play space. The modern elementary-school program requires approximately thirty square feet of floor space per pupil; sixteen linear feet of chalkboard per classroom; and walls that are equipped with bulletin boards for display purposes. There should be ample storage space for instructional supplies, a vertical file and bookcases for the teacher, and bookshelves for pupils to use. Movable seat-and-desk combinations or posture chairs and tables provide satisfactory seating.[2]

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[2] See the following references for more detailed suggestions in regard to modern elementary-school buildings and classrooms:

American Association of School Administrators, *American School Buildings* (National Education Association, 1949);

William W. Caudill, *Toward Better School Design* (F. W. Dodge Corp., 1954);

Helen Heffernan and Charles Bursch, *Curriculum and the Elementary School Plant* (Association for Supervision and Curriculum Development, National Education Association, 1958).

Good housekeeping

The teacher and pupils can do much to keep the classroom neat and attractive. Habits of using the wastebasket, of placing wraps and rubbers in the proper places, of eliminating many dust-collecting materials, of washing the hands before lunch, of maintaining proper room temperature, of keeping chalkboards clean and window shades adjusted properly—all these are important phases of good housekeeping. Pupils with impaired hearing or eyesight should be placed as favorably as possible in the room; seats should be arranged so that pupils get the best possible light; and artificial light should be used with care and intelligence. Pupils should be taught how to use drinking fountains safely, to keep everything in its place, and to clear their desks at the close of the school day.

Improving School Health Services

Systematic observations of school children generally indicate that the longer children attend school, the more physical defects they develop. As they progress from grade to grade in the school, increasing percentages require glasses, suffer from hearing defects, and develop defective teeth. The same is true for neuroses, speech defects, and digestive and cardiac ailments. Dandruff, pimples, fallen arches, hernia, back pains, and athlete's foot seem to afflict more and more children and youth as they pass from junior high school into senior high school and college. Fortunately, some of these defects tend to disappear during or following late adolescence; others, if not discovered and corrected, continue indefinitely.

The extent to which the conditions and demands of the school are responsible for this increase in defects is not known. It is well known, however, that many schools do not provide an environment conducive to the conservation of vision. All too frequently the elementary-school classroom, with its single, unshaded light bulb, its dingy walls covered with chalkboards, and its dark-topped desks, contributes to defective vision. There is considerable evidence that comfort and efficiency are fostered by good practices in school lighting, and there is no evidence that suggests that vision is impaired by work under good conditions such as those recommended by the National Society for the Prevention of Blindness.

One of the benefits claimed for universal military training is that it will provide an opportunity for the youth of the nation to be restored to a condition of fitness. School health programs should be designed to accomplish this purpose, but the fact is that the efforts made to date in many school systems fall far short of the mark when measured in terms of defects actually

remedied. Facts revealed by many studies point to the need for more effective school health services. The following list, by no means inclusive, is sufficient to illustrate the need:

1. The White House Conference report in the early 1930's stated that 20 per cent of all children had eye defects.[3] The 1950 report of the National Society for the Prevention of Blindness, citing a study made in the public schools of Saint Louis, Mo., revealed that one out of four grade school children examined was found to need eye care.[4] Nyswander points out that many cases of defective vision among school children are not known to teachers and other school officials.[5]

2. From 3 to 6 per cent of all school children have hearing defects of sufficient severity to interfere with their progress in school. Teachers appear to be less aware of defective hearing than they are of defective vision, although deafness may have more serious effects upon normal school progress and social adjustment. Almost twice as many boys as girls suffer from impaired hearing.

3. Dental defects appear to be occurring among school children about six times as rapidly as they are being corrected. Dental defects accounted for one of every five rejections by the armed services during World War II. This is particularly disquieting when it is known that the minimum requirement was only six pairs of opposing teeth out of a total of fourteen pairs. For the men finally inducted, more than 1,400,000 bridges and dentures were made and 31,000,000 cavities were filled.

4. Public Health Reports suggest that many of the defects of men rejected for military service could have been prevented.[6] Among the men who had been reared in five North Carolina orphanages, only 1.4 per cent were rejected, whereas the rejection rate for the state as a whole was 44.6 per cent. The difference is attributed to better pediatric and surgical care afforded the children in the orphanages as compared with that available to other children in the state. A study of young men from Hagerstown, Md., showed that defects of vision and dentation leading to rejection by the armed services had been recorded on school health records fifteen years prior to the rejection.

Although authorities may not agree on the exact proportions of preventable defects occurring among school children, there seems to be general agreement that there is a need for effective school health services that begin in early childhood and provide for home-school-community cooperation in preventing defects and in correcting those that are remediable.

[3] White House Conference on Child Health and Protection, *Special Education: The Handicapped and Gifted* (Century Co., 1932), pp. 126–127.

[4] *Let There Be Sight for All* (National Society for the Prevention of Blindness, 1950).

[5] Dorothy B. Nyswander, *Solving School Health Problems* (Commonwealth Fund, 1942).

[6] Public Health Service, *Public Health Reports*, Superintendent of Documents, United States Government Printing Office, May 11, 1951, p. 607.

Purposes of school health services

School health services are provided through the cooperative efforts of the school, the local health department, parents, physicians, nurses, dentists, civic clubs, and other citizens of the community. These services are provided for the purpose of taking care of emergencies, preventing the spread of communicable diseases, discovering and correcting physical defects, and giving pupils and their parents the guidance they need in solving their own health problems.

Health services may be used as educative experiences for increasing the knowledge, improving the attitudes, and influencing the behavior of children in relation to health problems. For example, the teacher may take advantage of the immunization program to teach children how immunization helps the body build defenses against disease. The film *Defense against Invasion*, listed at the end of this chapter, may be used for this purpose. The teacher may also take advantage of the heightened interest manifested during epidemics and accidents to instruct pupils on what should and should not be done in such circumstances.

Types of school health services

The modern elementary school provides many types of health services. Some of the more important ones are discussed in the next several paragraphs.

CARE OF EMERGENCIES. It is the responsibility of the elementary-school principal to see that the school has clearly defined programs relating to the care of emergencies, that teachers and children understand these programs, and that the programs are made effective when emergencies arise. In every school some accidents will happen and some children will have sudden illness. Teachers should know what procedures they are authorized to use in such cases. The children should also know these procedures so that their attempts to be helpful at times of accidents or sudden illness will not make matters worse and cause needless suffering.

The following policies are generally recognized as sound by competent educational and medical authorities:[7]

1. The school staff, in cooperation with medical advisers, should prepare a written statement of procedures to be followed in cases of accidents or sudden illness.

2. There should be at least one staff member, who is well trained in first aid, present at all times.

[7] For more detailed suggestions, see *Suggested School Health Policies* (National Education Association, 1956).

3. The school should have an adequate supply of first-aid materials and first-aid manuals containing directions for their use.

4. Members of the school staff should not diagnose a condition and should administer medication only when prescribed by a physician.

5. Sick or injured children should not be sent home alone. Parents should be contacted immediately and asked to state to what physician, hospital, or home address the child should be taken.

6. If neither parent can be reached, the pupil's own family physician should be contacted. The pupil's permanent health record should contain the name, address, and telephone number of his family physician.

7. Members of the school staff should know what treatment facilities are available in the community and be prepared to help parents who are new in the community or who have no family physician to find these facilities. A list of the physicians and hospitals in the community should be posted in the principal's office, giving names, addresses, and telephone numbers.

8. If school physicians or nurses are available they will be expected to take charge of emergencies, but their responsibility should be limited strictly to emergency care and should end when the parents place the child in the care of the family physician.

PREVENTION AND CONTROL OF COMMUNICABLE DISEASES. The school shares with the home and the community the responsibility for prevention and control of communicable diseases. Because children are required by law to attend school, because the incidence of communicable diseases is quite high among school-age children, and because many cases of such diseases are discovered while children are at school, it is obvious that the school has considerable, though by no means sole, responsibility for the prevention and control of such diseases. The principal responsibilities of the school in the control of communicable diseases consist of encouraging parents to make full use of immunizations and other preventive measures, conducting daily observations for symptoms of communicable diseases, seeing that children who are ill are not allowed to attend school, notifying parents when communicable diseases have occurred among the child's classmates, and protecting children against exposure to communicable diseases by providing sanitary buildings and adequate washroom facilities.

The policy of awarding certificates for perfect attendance—a policy encouraged by the distribution of state school funds on the basis of average daily attendance—sometimes hinders the efforts of the school to control the spread of communicable diseases. There are methods of motivating regular attendance which are less harmful to the health of the child and his classmates. Furthermore, experience has proved that the exclusion from school of children who show symptoms of the beginnings of communicable diseases or who are suffering from severe colds does less damage to attendance records

in the long run than the spread of colds or diseases, which results in prolonged absences of more children.[8]

HEALTH GUIDANCE. The health guidance program is concerned with discovering the health needs and problems of children and with helping them and their parents find ways of meeting these needs. It is a means of promoting better cooperation among the home, the school, and the community for the purpose of protecting and improving the health of each child. Discovering the health needs of children involves such activities as the preschool roundup, developing a health history for each child, daily health inspection and screening by the teacher, dental examinations, medical examinations, and conferences with parents.

The preschool roundup program, which is usually conducted during the summer before the child enters school for the first time, has done much to make parents aware of the health needs of children. Where such programs are conducted the child who enters school for the first time has had a medical examination and a dental examination and has been given the necessary vaccinations and immunizations. If he has any physical defects, such as impaired vision or hearing, the school is informed and can be prepared to alter the child's program to take care of these handicaps.

A dependable health history for each child provides invaluable information for the health guidance program. It will reveal whether or not the child is examined regularly by his family physician and dentist; what contagious diseases he has had; the dates of immunizations and vaccinations; environmental and hereditary health data; and habits relating to rest, play, sleep, and nutrition.

Daily observation by the teacher for the purpose of detecting signs of abnormality is an important source of information concerning the health needs of children. For example, a teacher discovered during the physical-education period that one girl had symptoms of curvature of the spinal column. She reported this observation to the parents, who then had the child examined by a bone specialist and found that the child needed regular and prolonged treatment to prevent her from becoming hopelessly deformed.

There has been a trend in recent years to de-emphasize the annual school health examination. This has resulted from the facts that medical, dental, and nursing personnel often do not have time for more than a hasty examination and that the records of the examination have frequently been filed but not followed up. Although the best school examination cannot replace examinations made by the family physician or dentist in his properly equipped office or clinic, many children do not have the services of either a family physician or dentist. It is therefore necessary that the schools provide for periodic examinations of these children either by school physicians or by

[8] American Association of School Administrators, op. cit., p. 329.

public health personnel. Following the school health examination, the staff of the school should maintain contact with the parents to see that further diagnosis, correction, and treatment are carried out either by private physicians or by community health agencies.

Improving Health Instruction

Promoting health through instruction that is closely related to real-life situations constitutes a real challenge to the elementary-school staff. Learning experiences relating to health knowledge, attitudes, and habits should be planned as carefully as any other part of the curriculum. The emphasis on healthful living as the primary objective of health education does not in any way minimize the need for accurate information as a foundation for intelligent behavior.

Elementary schools have approached the problem of improving health instruction through the study of health interests and needs of children, through surveys of community health problems, and through cooperative planning.

Interests and needs of children

A committee of teachers appointed by the Denver Public Schools to provide leadership in the development of a functional health program decided that it would need more information concerning (1) the health interests of children, (2) the health needs of children, and (3) the developmental characteristics of children at various age levels. Accordingly, a research project was instituted and a report has been published showing separately the interests of boys and girls in various health topics and activities at each grade level from grades four through twelve.[9]

The work of the committee was guided by the following basic assumptions:

1. Learning experiences, in order to be meaningful to children, must be related to their interests and concerns.

2. Health instruction can be functional only in so far as it provides solutions to the real problems of boys and girls.

3. Developmental characteristics affect the interests and concerns of children.

4. Health needs of children give leads for selecting experiences in a health program.

[9] *Health Interests of Children* (Denver Public Schools, Denver, Colo., 1947).

5. Parents, teachers, experts in the field of health education, and children themselves are resources through which health interests, concerns, and needs of children can be discovered.

6. Recognized authorities in the field of child growth and development are acceptable as sources of information for purposes of the study.

7. A basic knowledge of interests, concerns, needs, and developmental characteristics of children at various age levels is essential information for building a functional health program.

The twelve health items that were found to be of greatest interest to boys and girls in grades four, five, and six were as follows:

FOURTH-GRADE BOYS

1. To learn how to build muscles.
2. To learn how to be a good winner.
3. To be shown how to care for a bleeding cut.
4. To see a moving picture on the care of snake bites.
5. To see a film on water safety.
6. To find out why some people like you and others do not.
7. To learn traffic rules for bicycles.
8. To learn the foods to eat to keep well.
9. To learn how to take good care of your eyes.
10. To wear clean clothes.
11. To find out how much milk you should have each day.
12. To learn why your eyes are blue or brown.

FOURTH-GRADE GIRLS

1. To wear clean clothes.
2. To learn why it is important to use your own comb, toothbrush and towel.
3. To learn how to take good care of your eyes.
4. To learn how to be well liked by teachers.
5. To learn how to get to school safely.
6. To keep your hands and fingernails clean.
7. To learn how to be a good winner.
8. To find out how much milk you should have each day.
9. To find out what your weight and height should be.
10. To learn the best way to brush your teeth.
11. To learn how to take a person's pulse and temperature.
12. To make a first-aid kit for your home.

FIFTH-GRADE BOYS

1. To learn how to build muscles.
2. To keep your hands and fingernails clean.
3. To learn how to take good care of your eyes.
4. To find out how much milk you should have each day.
5. To learn how to be a good winner.

FIFTH-GRADE GIRLS

1. To wear clean clothes.
2. To keep your clothes clean and well-pressed.
3. To learn why it is important to use your own toothbrush, comb, and towel.
4. To learn how to take good care of your eyes.
5. To learn how to be a good winner.

FIFTH-GRADE BOYS—Cont'd

6. To see a moving picture on the care of snake bites.
7. To visit a dairy to see how milk is pasteurized.
8. To learn how to get to school safely.
9. To learn the best way to brush your teeth.
10. To find out what your height and weight should be.
11. *To know why it is important to drink plenty of water.*
12. To learn the foods to eat to keep well.

SIXTH-GRADE BOYS

1. To learn how to take good care of your eyes.
2. *To learn how to be a good winner.*
3. To keep your hands and fingernails clean.
4. *To learn how to build muscles.*
5. To learn how to take care of simple injuries.
6. To find out safety rules in and around water.
7. To practice body-building exercises.
8. To learn how to introduce people properly.
9. *To find out where most accidents occur at home.*
10. To be shown how to care for a bleeding cut.
11. *To find out why you should keep yourself clean.*
12. To wear clean clothes.

FIFTH-GRADE GIRLS—Cont'd

6. To learn how to introduce people properly.
7. To learn how to select a good lunch.
8. To keep your hands and fingernails clean.
9. To learn how to prepare food for a sickroom.
10. To learn the best way to brush your teeth.
11. *To find out what your height and weight should be.*
12. To learn the foods to eat to keep well.

SIXTH-GRADE GIRLS

1. To learn how to prepare food for a sick person.
2. *To learn how to select your clothes.*
3. To keep your hands and fingernails clean.
4. *To find out what your height and weight should be.*
5. To learn how to take care of your eyes.
6. *To learn how to be a good winner.*
7. To be shown how to care for a bleeding cut.
8. To find out why some people like you and others do not.
9. To experiment with different ways of combing your hair.
10. To learn how to take a sick person's pulse and temperature.
11. *To learn how to take care of simple injuries.*
12. To read a book on how to be popular.

This does not imply that teachers determine the scope of the curriculum on the basis of the expressed interests of children. The Denver study included the needs and developmental characteristics of children at various age levels, as well as the health interests of children. Teachers, experts in the field of health education, and children themselves were consulted.

The point of view has been expressed several times in this book that

children's interests alone do not constitute an adequate basis for the selection of curriculum content. The expressed interests of children frequently reflect what they believe the teacher wants them to say rather than their own genuine interests, and are often somewhat superficial and reveal gaps in the pupil's information concerning important areas for study. They do provide the teacher with important information about the current state of pupil's knowledge about health and indicate to some extent what changes in health interests occur with age. The teacher, however, must obtain information from many other sources, including information about the special health problems in the community, the health problems of children from different socioeconomic levels, and the major health problems we face as a nation. Information about mental health and heart disease is particularly important, for attention to these two areas in childhood can prevent serious illness in adulthood.

Community problems and resources

The interests of children are related to the conditions existing in the local community. The health needs of children can be met only as the community, as well as the school, becomes a healthful place in which to live. An understanding of the health problems and resources of the community is, therefore, an indispensable part of curriculum-planning. What are the leading causes of death in the community, county, and state? How are food-handling places regulated in the interests of health? What needs to be done about the city dump, street cleaning, public safety, and rats and mosquitoes? A community survey involving these and other items that influence health in the community should be made as a background for curriculum-planning. Children in the elementary school can learn to work with parents and other interested citizens to improve community health conditions.

Cooperative planning

The development of a functional program of health instruction involves cooperation between the school and the community. Even in small communities there are many organized groups, as well as individuals with specialized skills, that may be utilized in planning the program. Alert educational leadership will recognize that health is a cooperative enterprise and will develop procedures for bringing all available resources to bear on the health instruction program. The community health council provides the means for cooperative planning and action in many communities. These councils usually

consist of representatives from the school administration, teachers, custodians, students, physicians, dentists, nurses, public health officials, and various lay organizations.

Organizing the Program

Just as there is a need for learning combinations in arithmetic and vocabulary in reading, so there is a need for building a factual basis for healthful living. This does not mean, however, that facts must always be learned by abstract drill or by reciting from a textbook during a period set aside for health instruction alone. No single method of incorporating health instruction into the curriculum will suffice; the well-organized program will give proper emphasis to incidental teaching, to correlation with other curriculum areas, and to direct teaching.

Incidental teaching

In the primary grades, health instruction consists largely in helping children live more healthfully each day and in making use of incidents as they arise in connection with school living to improve health practices and understanding. The alert teacher finds many opportunities for relating health instruction to such experiences as dental and medical examinations, immunizations, weighing and measuring, morning inspection, hand-washing, playground activities, and the lunch period. Incidental teaching of health can continue to supplement direct teaching in the grades above the primary level.

Correlation with other curriculum areas

Opportunities for developing understanding of health problems and influencing health behavior exist in many curriculum areas. Oral and written composition may well utilize content relating to health; arithmetic provides opportunities for such experiences as constructing height-and-weight charts and computing the caloric values of foods and the percentages of deaths caused by certain diseases; science provides opportunities for learning the principles of reproduction, growth, and survival; the social studies provide opportunities for studying about food, clothing, shelter, and other problems relating to health and safety in the home and community as well as in other countries; and music, art, and drama may well employ content from the area of health. In a school that is organized on the "self-contained classroom"

A New Look at Playgrounds

In the post-war rush to house America's school children, thousands of new school buildings have been constructed. For the most part, their sites have been carefully planned so that play space is adequate. Until recently, however, equipment has been the traditional see-saws, swings, and horizontal bars. The photo on the opposite page is illustrative of a marked trend toward a different type of equipment, with forms suggestive of sculpture and so designed as to encourage creative play. The new equipment is also safer; heavy swings on long steel chains have given way to lighter yet even stronger materials.

The equipment illustrated is designed for children in the primary grades. Indeed, stationary pieces are rarely appropriate for pupils in grades above the third. In the past, teachers have relied upon group games—baseball, touch-football, volley-ball, and the like—as playground activities for older children. There is growing recognition, however, of the fact that individual sports as well as team sports have a place in the physical education curriculum. Boys and girls growing up in America today will mature in an age of automation, where more and more processes will be carried on without benefit of manpower, and where the work-week will be appreciably shortened. There will be more time for recreation and more need for vigorous physical activity to counteract the effects of sedentary living. Even with limited resources, teachers can help build in pupils an interest in games and sports that do not require large numbers of participants. Horseshoes, bowls, sand piles for broad-jumping, a short track for running—these are not difficult to provide and are suggestive of a more diversified approach to the physical education program than the traditional group games.

© (Photo: Play Sculptures, Inc., New York)
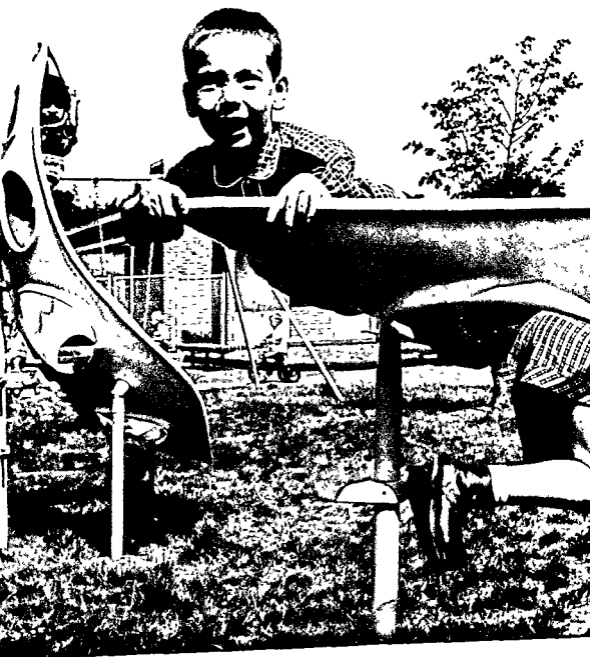
Fostering Creativity

Whether elementary education should *attempt to foster creativity* is much disputed today. There are those who argue that *creative activities are a waste of time better spent in learning the basic skills.* These people would grant the need in the modern world for creative statesmen, scientists, artists, musicians and writers, but generally consider that these are produced in a curriculum with a strong emphasis upon traditional subject-matter and learning activities. The modern school does not deny the importance of subject-matter but insists that proper selection of learning activities will result in better learners and more creative thinkers. In all subjects whenever it is feasible children are encouraged to develop original solutions to problems. The photo-comments between pages 307 and 308 illustrate the methods used in connection with the teaching of arithmetic and science. Here a child in the kindergarten is having a creative experience with clay. *After experimenting with the medium to find out its potentialities, she is now giving expression to a concept which she has called, "Going Up a Mountain."*

The art period in elementary schools would seem to offer an ideal opportunity for fostering creative expression, but unfortunately it is not always so used. In some classrooms, children are given outlines to color and patterns to trace, or they may be given specific instructions on how to draw a tree, a bird, or a child. Lessons such as these give pupils practice in following directions, but they do not encourage creative thinking nor result in creative products.

Some teachers plan the art period so that children may choose from among three or four media—perhaps paints, clay, or crayons. *What they are to draw or paint is not dictated, but they are given freedom to express ideas that they have. These ideas may come from trips that they have taken, stories they have read, observations in nature they have made, or occurrences in everyday living that they have experienced* Children who say, "But I don't know what to draw" are helped to recall a recent experience and to see that one's own experiences provide the reservoir from which one creates. Pupils who never seem to have ideas are encouraged, not just in art period, to be better observers. Some children never see a sunset, never notice the pattern of dark and light in the classroom, never observe how a vista may be framed by nearby trees, *never see the interesting composition of three heads bent over a desk. These children must become more aware of their environment,* must have many more and sharper perceptions in order to take what they have perceived and recreate it in an original fashion.

Creative experiences are fun for children, as is clear in the photo, but they are not included because they are fun. *Creative experiences enrich our daily living and in these days of increasing automation are essential if man is to remain man.*

basis,[10] the teacher is in a very favorable position for taking advantage of opportunities for health teaching in connection with other school experiences. If the departmental organization is in use, a great deal of cooperative planning on the part of the school staff is necessary in order to avoid duplications and serious omissions in content and activities relating to health.

The direct teaching of health

Since health is recognized as one of the most important objectives of education, it should be given at least as much time and attention as any other curriculum area. The teacher and administrator should see that whatever time is necessary for fostering the health of pupils is available and used. In many schools this problem is solved, in part at least, by setting aside a definite time in the daily schedule for health instruction so that it will not be neglected.

Appropriate content and activities

Health instruction in the elementary school usually centers around the development of understanding, attitudes, and behavior related to (1) personal hygiene, (2) nutrition, (3) communicable diseases, (4) sanitation, (5) rest and relaxation, (6) posture, (7) clothing, and (8) safety. The following outline is presented to illustrate appropriate content and activities in each of these areas. No effort has been made to assign specific topics to grade levels; obviously most of the topics will be given attention in each grade on varying levels of difficulty.

CARE OF THE BODY

1. Learning some of the elementary facts about the structure of the human body;
2. Learning the importance of bathing regularly;
3. Forming the habit of using only one's own towel;
4. Waiting at least one hour after eating before swimming or taking a bath;
5. Protecting the skin from sunburn;
6. Protecting the skin by proper dietary habits and by using adequate water and a mild soap;
7. Avoiding squeezing blackheads, boils, or pimples;
8. Keeping fingernails clean and neatly trimmed;

[10] The "self-contained classroom" is a term used to describe a situation in which one teacher teaches all the subjects in contrast to a departmentalized organization in which one teacher teaches arithmetic, another teaches the language arts, and another, the social studies.

9. Coming to school with clean, well-brushed hair;
10. Learning to brush one's teeth in the proper manner twice a day;
11. Refraining from biting hard substances with the teeth;
12. Understanding the need for regular dental checkups;
13. Understanding that excessive use of sweets is injurious to the teeth;
14. Forming the habit of washing the ears thoroughly and carefully;
15. Avoiding drafts and strong winds blowing into the ears;
16. Learning to recognize symptoms of ear trouble and going to a physician promptly when such symptoms appear;
17. Keeping the fingers away from the nose;
18. Using a clean handkerchief or piece of soft paper for nasal discharges;
19. Learning what kind of shoes are best for growing feet;
20. Reading with proper light, resting the eyes occasionally, and refraining from looking at the sun or bright lights;
21. Understanding the need for frequent examinations of the eyes.

PROPER FOODS

1. Making a chart showing the basic foods;
2. Knowing the foods that build strong teeth;
3. Learning how fresh foods should be washed and peeled;
4. Learning how extreme heat and cold affect the digestion;
5. Demonstrating the harmful effects of fried and highly seasoned foods;
6. Understanding the importance of proper mastication of foods;
7. Learning how cheerfulness and relaxation aid digestion;
8. Discussing the harmful effects of eating between meals;
9. Making charts showing proper foods for various weather conditions;
10. Planning a well-balanced breakfast, lunch, and dinner;
11. Demonstrating good table manners.

CONTAGIOUS DISEASES

1. Learning to drink from fountains properly;
2. Keeping pencils, fingers, and money out of the mouth;
3. Demonstrating the proper method of covering the mouth when coughing or sneezing;
4. Staying at home when one has a cold or other illness;
5. Keeping away from crowded places during an epidemic;
6. Seeing a film on immunization to learn its importance;
7. Learning how immunization helps the body fight diseases;
8. Learning the importance of safe water and milk sources;
9. Learning methods of protecting ourselves against flies;
10. Refraining from running the hands along bannisters in stores.

SANITATION

1. Understanding what constitutes sanitary drinking facilities;
2. Demonstrating the proper way to wash, rinse, and dry hands;
3. Learning the most important community health laws;
4. Helping to maintain a clean and sanitary school, home, and community;
5. Taking part in community clean-up campaigns;
6. Making plans for helping to keep the home sanitary by washing dishes,

caring for the refrigerator, keeping the kitchen clean, taking care of the bathroom, keeping the bedroom clean and orderly, cleaning and dusting, disposing of waste.

REST, SLEEP, AND RELAXATION

1. Learning the importance of opening windows at night, wearing loose, proper-weight clothes at night, and bathing before going to bed;
2. Getting 10–12 hours of sleep if the child is under eleven years old;
3. Forming the habit of taking regular rest periods during the day;
4. Planning play so that one does not become overfatigued;
5. Planning work, study, and recreation so that they do not interfere with getting the right amount of sleep;
6. Sleeping with lights out and in a comfortable position;
7. Using light, warm covers;
8. Demonstrating how sleep and rest are necessary for convalescence.

POSTURE

1. Choosing chairs of suitable size, sitting and standing erect, walking without scuffing one's feet, and refraining from putting hands into pockets;
2. Taking corrective exercises when prescribed;
3. Wearing appropriately fitted shoes and clothing;
4. Taking part in group games that develop muscles;
5. Dramatizing good posture, slouch, and stoop;
6. Avoiding hurry and overexcitement;
7. Guarding against fatigue;
8. Making surveys of what can be done to improve posture;
9. Learning the influence of posture on bones and organs;
10. Pointing the toes straight ahead when standing or walking.

CLOTHING

1. Learning the importance of wearing raincoat and rubbers during rainy weather;
2. Learning why clothes need to be washed, cleaned, and pressed;
3. Planning and selecting appropriate clothes for the season;
4. Making a scrapbook showing seasonal clothing;
5. Learning how cottons and linens permit air to pass through and perspiration to evaporate; how furs and woolens retain warmth;
6. Demonstrating how white or light-colored materials reflect the sun's rays, whereas black or dark colors absorb the rays;
7. Demonstrating the proper way to hang up hats, coats, and sweaters.

SAFETY

1. Telling one's own name, address, and telephone number;
2. Refraining from talking to or riding with strangers;
3. Refraining from playing in the street or on the highway;
4. Learning how to ride a bicycle safely, learning the city regulations about bicycles, learning to give traffic signals;
5. Demonstrating how to care for bicycles and how to ride them safely;

6. Knowing first-aid measures, including measures for hiccoughs, nosebleed, and what to do when a person catches on fire;

7. Crossing the street at corners, looking both ways, and obeying traffic signals;

8. Knowing safe practices in swimming and boating;

9. Distinguishing between safe and unsafe places and materials for play.

Materials and methods used in health instruction

Modern textbooks for use in the health instruction program are available in increasing variety and improved quality. There can be little question that an elementary school should have available for use one or more of the excellent series of textbooks now on the market. They provide excellent reading material for children, suggestions for teachers relating to suitable content, and useful data relating to health problems. The textbook does not, however, constitute the only source of instructional material. Instructional materials should include printed materials, such as books, magazines, newspapers, and pamphlets; audio-visual resources, such as motion pictures, slides, graphs, models, posters, and charts; and environmental materials found in the home, school, and community.

The following criteria should be observed in the selection of materials for health instruction:

1. Materials should be scientifically sound.

2. Materials selected should provide for individual differences and needs.

3. Materials selected should provide for progression in activities and present opportunities for growth.

4. Materials selected should be closely related to experiences of children so that they will be meaningful.

5. Materials selected should have important content and not merely entertainment appeal.

Whether or not a period is set aside in the primary grades for health instruction, efforts should be made to direct the attention of teachers to the health opportunities and responsibilities related to their teaching. Methods of introducing health instruction into the curriculum in the primary grades include (1) using routine daily experiences, such as the morning inspection; the school lunch; rest periods; use of toilets, washbowls, and drinking fountains; examinations, immunizations, and play periods; and adaptation of clothing to weather conditions; (2) helping children explore and understand the health aspects of the environment by studying about milk, water, food, housing, clothing, pets, plants, industries, and transportation; and (3) using health readers and dramatic play. The extent to which each of these methods is used depends upon the needs of the group, the availability of materials, and the skill and understanding of the teacher.

all pupils. Physical education is an integral part of the elementary-school curriculum rather than merely a series of exercise periods; it contributes to many of the most important objectives of education in a democratic society. Children are so constituted that they need an enormous amount of exercise for the normal development of muscles, circulation, respiration, and other bodily functions; their normal social development requires opportunities for developing recreational interests and skills and for learning to play with others, to choose and respect leaders, and to follow the rules of the game. The monotonous, tense, and highly emotionalized work in which many people engage today, together with the increasing amount of leisure time available, make the development of recreational interests and skills a social necessity. The potential values of a good physical-education program for personality development and effective living should not be overlooked; there is no better way to establish easy and companionable human relations, develop friendships, and learn how to be both a good leader and a good follower than through a modern program of physical education.

Objectives of the modern physical-education program

During the past few decades, the objectives of physical education have been broadened to include the development of the entire personality of the pupil rather than merely to provide "physical training." Physical education contributes to health, strength, social living, and the development of enduring recreational interests and skills. These objectives may be stated more specifically as follows:

1. To aid in the development of strength, physical fitness, and organic power;

2. To provide a means of self-expression and to contribute to mental health;

3. To contribute to the social development of children by providing opportunities to play with other children;

4. To provide a means of relaxation from the more formal aspects of the school program;

5. To develop recreational interests and skills that can be used for wholesome leisure activities after school has been completed;

6. To provide opportunities for pleasure and satisfaction through the release of physical and emotional energy;

7. To develop habits of good sportsmanship which will build toward character and good citizenship;

8. To develop the ability to appreciate rythmics as a participant or a spectator.

The interests and needs of children:
a basis for physical education

In the planning of the physical-education program the interests and needs of children of a given age level must be considered and the developmental status of each child must be determined. The teacher must begin with each child where he is, for a third-grade child may still be at the kindergarten level in neuromuscular development. Techniques available for determining the developmental status of children include observation, a study of health records, and conferences with parents, physicians, and nurses. *A study of the motor characteristics of children, such as that prepared by Gesell and Ilg,[11] provides suggestions for selecting appropriate activities for the physical-education program.*

Scope of the physical-education program

The modern physical-education program includes many different types of activities to ensure that each child will have an opportunity to enjoy the feeling of satisfaction that results from participation in activities adapted to his needs and abilities. The following types are generally recognized as suitable for elementary-school children:

FREE PLAY. For many years psychologists have been pointing out the value of dramatic play for sound emotional growth. For some children play is a safety valve; they act out their hopes, their fears, their hostilities, and their aggressions as they engage in house or war or cowboy play, or a similar activity. Kindergarten and primary teachers, recognizing the value of play, have attempted to provide the kinds of equipment and opportunities that would encourage this kind of play. In many classrooms there is a housekeeping corner equipped with doll bed, dolls, play stove, table and chairs, dishes, cupboards, dress-up clothes, and the like. A corner for block play, equipped with unit blocks and miniature airplanes, cars, trucks, and the like, also encourages good dramatic play.

During the time set aside for free play a small group may gather in this corner to *dress themselves up and play at being father or mother, doctor or nurse. Five-year-old Richard, who feared the doctor, listened to the Teddy bear's heartbeat, took his temperature, and gave him a "shot" while the Teddy bear protested vigorously and the "doctor" reassured him. Playing the role of sick child gave Richard the opportunity to express his own fears and*

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hostilities; playing the role of doctor helped to give Richard assurance that the discomfort would be momentary.

On the playground, children's undirected play may center around the equipment with which the yard is provided. Many schools are finding that the conventional swings, slide, and merry-go-round offer expensive and limited opportunities for play. A corner where children can dig, a knotted rope swinging from a tree, packing boxes and walking boards, a cargo net suspended from poles for climbing provide for good vigorous activity at minimum cost.

The seasonal games—hopscotch, jump rope, marbles, and the like—which are so much a part of children's culture, are an important part of play. These games provide children with the opportunity to practice the rudiments of social organization. They make up their rules, decide who is going to be included or excluded, and enforce their decisions with firmness and finality. The good teacher will observe children carefully at such play and help them to make decisions that will not be cruel and unjust to anyone in the group.

TEAM GAMES. Team games are related principally to athletic sports, and, in order to prevent discouragement, children should be introduced to them gradually. In the grades above the fourth, boys should usually be separated from girls. These games involve rather complicated skills, for which considerable practice is necessary in order to raise the level of performance. They offer many natural situations for developing desirable character traits. Team games include softball, touch football, basketball, and circle soccer.

RHYTHMIC ACTIVITIES. It is highly desirable to have activities in which the child responds physically, mentally, and emotionally to music or rhythm. Basic rhythms call for movements involving the use of the large muscles and do not require a high degree of coordination. Careful selection of music suited to the activity and frequent opportunities to practice are essential. The ideas on which the movements are based should come from the children themselves and should be based on actual experiences the children have had. The aim is to evoke free expression from the children themselves rather than an imitation of the teacher's interpretation.

STUNTS, PYRAMIDS, AND APPARATUS ACTIVITIES. Stunts provide an excellent form of exercise, are easily organized, are economical of space and equipment, and are adaptable to many age levels. Pyramid-building provides a place for everyone—including the very small child and the overweight child, who have difficulty in finding a place of importance in other games. Apparatus activities provide an opportunity for the development of certain groups of muscles that contribute to good posture.

CLASSROOM GAMES. Classroom games, such as "Farmer in the Dell" and "Did You Ever See A Lassie?" are usually played when the weather is not suitable for outdoor play, when space is not available for other activities, or

when certain children cannot participate in the more vigorous activities. They help toward the accomplishment of the social, the recreational, and, to some extent, the skill objectives of the physical-education program.

Cooperative planning of the physical-education program

In the primary grades, physical education is usually taught by the classroom teacher with help, when possible, from supervisors with special preparation in physical education. A minimum of fifteen minutes in the morning and again in the afternoon, exclusive of recess periods, should be devoted to physical education. In the grades beginning with the fourth, one period of thirty minutes should be devoted to physical education daily under the direction of the classroom teacher or a teacher with special preparation in physical education. A curriculum guide, prepared through the cooperative efforts of administrators, supervisors, teachers, pupils, and parents, can provide suggestions regarding appropriate activities, materials, plans for evaluation of progress, and suggestions for integrating physical education with other curriculum areas. It is desirable to have the same group plan both the health and the physical-education programs, because the two overlap at many points. Like other parts of the elementary-school curriculum, the program in health and physical education requires continuous study, modification, and evaluation.

Summary

1. Health is more than the absence of disease and infirmity; it is a positive quality of life that enables the individual to "live most and serve best."

2. Education for healthful living takes into account the total personality of the child and the total environment that is influencing his development.

3. By providing adequate opportunities for healthful living, the home, the school, and the community can do much to make the basic tenets of democracy a reality for every child.

4. An adequate school health program includes a healthful school environment, school health services, health instruction, and a physical-education program.

5. The present condition of the educational plant and equipment in many American communities constitutes a severe handicap to the school staff in the effort to meet the health needs of children.

6. School health services include provision for emergency care in cases of injuries and sudden illness, the control of communicable diseases, and health counseling.

7. Elementary schools can improve health instruction through a study of the health interests and needs of children, through surveys of community health problems and resources, and through cooperative planning.

8. The objectives of health education center around the improvement of health understanding, attitudes, and habits of children and adults in the community.

9. Health instruction may take the form of incidental teaching, correlation with other curriculum areas, and direct teaching of health during periods set aside specifically for that purpose.

10. Physical education should be regarded as an integral part of the elementary-school curriculum rather than as merely an exercise period.

11. Physical education contributes to health, strength, social adjustment, and the development of lasting recreational interests and skills.

12. A study of the interest, needs, and developmental characteristics of children provides a basis for selecting activities appropriate for the physical-education program.

13. The physical-education program should include many types of activities to ensure that each child will have a chance to enjoy the feeling of satisfaction that comes from participating in activities suited to his interests and needs.

14. All pupils should be expected to participate in the physical-education program; those who are unable to participate in the more vigorous forms of activity should be given the opportunity to engage in modified activities.

15. Administrators, teachers, pupils, and parents should engage in continuous evaluation of the program in health and physical education and in making plans for its improvement.

SOME PROBLEMS AND PROJECTS

1. *North Side School* is interested in buying new playground equipment, but the Board of Education has no money in its budget for this item. The School Council discusses the problem and decides that the school can make money by opening a candy store in the basement. At present many pupils go to the corner grocery store for snacks at recess and before and after school. The Council's plan calls for purchase of supplies from a wholesaler and the sale of them to pupils at regular retail prices. The Council thinks that the

school can make $20 a week profit on the sales. Besides enabling North Side to buy the needed equipment, the candy store will also be a pleasant activity for the school children and will provide some real-life arithmetic practice for them.

What is your evaluation of the School Council's plan? Is a candy store in line with the goal of "a healthful school environment"? How might the plan be modified in the light of this goal?

2. Should elementary schools vary their health programs according to the social-class membership of pupils? Might the children of migrant workers have health needs different from those of children in a comfortable suburb? What might these differences be? How would these different needs affect (a) what is taught regarding health, and (b) the services a school provides for children?

3. Do teachers have a responsibility with regard to diet in helping pupils evaluate different brands of the same product? Should they have pupils study labels, for example, to see which kind of breakfast cereal will provide them with the most nourishment? Or is a teacher's responsibility discharged when she teaches about the basic seven foods?

4. The pupils in Washington School have a very good hot-lunch program, with balanced meals attractively served in a pleasant dining room. After the lunch period, the pupils go immediately to the playground for a half hour or more of play before school begins. Evaluate this procedure in the light of your knowledge of how the digestive system works. Can you suggest a more healthful plan for after lunch and one that will not make pupils rebellious over losing play time?

5. Johnny arrives in third grade one morning coughing, sneezing, and with eyes watering. The school health nurse is assigned to a different school on this day, and so the problem is up to the teacher and the principal. The teacher calls the mother to report on Johnny's condition. The mother says that Johnny has an allergy, which is responsible for the symptoms the teacher sees. What should the teacher and principal do?

6. Miss Alexander believes in working closely with the home on matters of health. "I weigh and measure my pupils periodically," she says, "and then I send them the report, indicating what percentage underweight or overweight each pupil is. I use height-weight charts to compute my percentages. Some parents act insulted if you tell them their child is not up to par but I think that if they know, they can regulate diets more intelligently."

Is Miss Alexander's procedure a sound one from a health standpoint? Are height and age the only factors to consider in determining weight?

What better procedure might Miss Alexander follow in informing parents of the health needs of their children?

7. Many of the problems that arise in connection with the teaching of health depend for an intelligent solution upon the teacher's own knowledge in the field. Furthermore, since solutions change as new knowledge is acquired through research, the teacher is hard put to keep up to date. To complicate matters still further, medical authorities are not always in agreement with regard to solutions, Years ago, for example, we taught pupils to sleep with windows wide open both in summer and in winter, in all parts of the United States. Now our advice is changed again as specialists tell us that winter breezes blowing upon a sleeper may aggravate a sinus condition.

How can a teacher build up her health knowledge and keep it up to date? How can teachers guard against fads in health teaching? Suggest some helpful sources of information.

8. A teacher's manual of playground games for young children includes a game in which the pupils stand two-deep in a circle. One child chases another around the circle until the one who is being chased stops in front of a pair of classmates. Then the member of the pair nearer to the outside of the circle must run.

Evaluate this game from the standpoint of what you know about the activity needs of young children. Does it provide enough exercise for all children? Under what conditions might it be a desirable game to play?

9. Design a piece of playground equipment for use in the primary grades of the elementary school. Try to have the equipment meet the following criteria:

 a. It must be sturdy and safe.
 b. As many as eight children must be able to use the equipment without undue delays and without dangerous overcrowding.
 c. The equipment should encourage creative play.
 d. The equipment should encourage physical activity that will develop coordination as well as strength.

10. The Montrose school district is building a new elementary school to house 350 pupils. A committee of teachers has been appointed to discuss with the architect the layout of the playground. The space set aside for the playground is 300 feet wide and 500 feet long. List the criteria that should govern the use of this space.

11. Contrary to popular belief, not all American boys like baseball and other team sports. Some prefer individual activities, or those in which only one or two other individuals participate. Suggest some playground activities for such pupils at the fifth- or sixth-grade level. Include only those that utilize inexpensive equipment.

12. Mr. Gellerman is disturbed, when he takes up his duties as principal of Weber School, to find that at recess time all 400 pupils in the school go out at the same time to share a small, hard-surfaced playground with no equipment. There they mill about for 15 minutes while two teachers watch to see that there is no disorder and to guard against accidents.

What changes might Mr. Gellerman propose to the teachers at Weber to improve the recess period? What might be done to compensate for the lack of equipment until a budget item is obtained for this purpose?

13. Miss Overton teaches in a section of the city inhabited by many children of recent immigrants. The school population includes children of Italian, Mexican, and Puerto Rican origin. Miss Overton has been working on the food habits of her pupils. "They eat far too many highly seasoned foods," she reports. "I'm trying to get them to substitute other things for so much chili and hot spaghetti sauce."

Is Miss Overton's goal a sound one? Should teachers try to change food habits that are national in origin? What might Miss Overton do with regard to the diet of her pupils?

SELECTED READINGS

Books

AMERICAN ASSOCIATION OF SCHOOL ADMINISTRATORS, *Health in Schools* (rev. ed., National Education Association, 1951). An excellent treatment of such problems as the health of school personnel, a healthful school environment, health instruction, and physical education.

ANDERSON, C. L., *School Health Practice* (C. V. Mosby, 1956). A comprehensive coverage of the subject of school health. Stresses evaluation of health instruction and student health.

BIRD, OLIVER E., *School Health Sourcebook* (Stanford University Press, 1955). Deals with pupil health problems, health instruction, school health services, the school environment, physical education, and community relationships.

FRASER, ELLEN D., BRANSFORD, JOHN B., and HASTINGS, MAMIE, *The Child and Physical Education* (Prentice-Hall, Inc., 1956). Principles of educational philosophy and child development are applied to the teaching of physical education.

GROUT, RUTH E., *Health Teaching in Schools* (2nd ed., W. B. Saunders Co.,

1953). An excellent textbook on health education in elementary and secondary schools.

HAAG, JESSIE HELEN, *School Health Program* (Henry Holt and Co., 1958). A thorough treatment of school health services, healthful school environment, school nutrition, community resources, health of school personnel, the school day, health instruction, and organization and administration of the school health program.

IRWIN, LESLIE W., HUMPHREY, JAMES H., and JOHNSON, WARREN R., *Methods and Materials in School Health Education* (C. V. Mosby, 1956). Suggests many techniques for making health instruction in elementary schools more effective.

JOINT COMMITTEE ON HEALTH PROBLEMS IN EDUCATION OF THE NATIONAL EDUCATION ASSOCIATION AND THE AMERICAN MEDICAL ASSOCIATION, *Healthful School Living* (National Education Association, 1957). Deals with organization of instruction and classroom procedures.

————, *School Health Services* (National Education Association, 1953). A modern, comprehensive guide for school health services.

————, *Suggested School Health Policies* (3rd ed., National Education Association, 1956). Provides a clear, comprehensive statement of specific school policies that directly or indirectly affect the health of pupils.

JONES, EDWINA, MORGAN, EDNA, and STEVENS, GLADYS, *Methods and Materials in Elementary Physical Education* (new ed., World Book Co., 1958). Presents unit plans and suggestions for teaching many phases of physical education.

SCHNEIDER, ROBERT E., *Methods and Materials of Health Education* (W. B. Saunders Co., 1958). A comprehensive treatment of the school health program, the health curriculum, method in health education, the materials of health education, and measurement and evaluation of health education. The chapter on "Films, Radio and Television" is especially valuable.

WALKER, HERBERT, *Health in the Elementary School* (The Ronald Press, 1955). A comprehensive treatment of the health program in the elementary school.

WHEATLEY, GEORGE M., and HALLOCK, GRACE T., *Health Observations of School Children* (new ed., McGraw-Hill, 1956). Stresses the importance of the teacher's observation of children's health, of physical defects, and health disorders.

Curriculum guides and research reports

GRAND RAPIDS BOARD OF EDUCATION, *Suggested Study Guide for Physical Education* (Grand Rapids, Mich., 1956). Gives suggestions for the physical-education program in the kindergarten and grades 1–6.

KANSAS CITY PUBLIC SCHOOLS, *Physical Education in Elementary Schools* (Kansas City, Mo., 1956). Curriculum guide for grades 1–7. Contains standards for physical development and achievement.

NORTH CAROLINA PUBLIC SCHOOLS, *Health Education* (State Superintendent of Public Instruction, Raleigh, N. C., 1953). An excellent curriculum guide for health and safety.

————, *Physical Education* (State Superintendent of Public Instruction, Raleigh,

N. C., 1952). An excellent curriculum guide for physical education in elementary and secondary schools. Contains a chart listing characteristics of children at various grade levels with appropriate physical education experiences for each level.

OKLAHOMA STATE DEPARTMENT OF EDUCATION, *Alcohol and Narcotics Education: A Curriculum Guide for Teachers* (Oklahoma City, Okla., 1957). Produced by a workshop group at the University of Oklahoma under the direction of M. Frederick Kilander, Professor of Education and Coordinator of Health Education, New York University.

SCHNEIDER, ELSA, *Ten Questions on Physical Education in Elementary Schools* (U.S. Department of Health, Education, and Welfare, Office of Education, 1957). A report on 523 school systems regarding policies, practices, and personnel for physical education in elementary schools.

SELECTED FILMS

The following represent only a few of the films available on health and physical education. The teacher should contact the film service in the local school system, the state university, or the state department of education for lists of films in these areas.

ALEXANDER LEARNS GOOD HEALTH. An 11-minute sound film showing how Alexander improves his habits with proper diet, rest, cleanliness, exercise—and later pitches a winning game. Coronet Films.

Bicycle Safety Skills. An 11-minute sound film emphasizing performance techniques, traffic rules and procedures, and bicycle inspection practices that make for good cyclers today and good motorists tomorrow. Coronet Films.

Dental Health: How and Why. An 11-minute sound film showing the relation of diet to the growth and decay of teeth and the latest techniques of oral hygiene. Coronet Films.

Foods that Build Good Health. An 11-minute sound film showing the relation of good health to the foods we eat. Coronet Films.

Learning about Our Bodies. An 11-minute sound film designed to familiarize children with the basic structure of the human body and the position and function of major organs. Coronet Films.

Physical Education for Primary Grades. A 22-minute sound film showing methods and forms of physical education that encourage purposeful activity for children. Iowa State University.

Physical Education Procedures for Elementary Schools. A 22-minute sound film intended for use with teacher-training classes. Iowa State University.

Schools for Tomorrow. A 22-minute sound film dealing with the planning of school buildings. Shows how one community used citizen's advisory groups, school personnel, an architect, and a school building consultant to help plan their schools. Wayne University.

Simple Stunts. A 10-minute sound film that explains stunts and group activities requiring little or no equipment. Emphasizes safety. Coronet Films.

Target: Tooth Decay. An 11-minute sound film that emphasizes the importance of community cooperation in a dental program; encourages the formation of local committees to provide for fluoride treatment. Educational Materials Center, University of Oklahoma.

Enriching and Beautifying Life— The Fine Arts

The emphasis of instruction in both art and music is no longer on producing fine-arts specialists and star performers, but rather on meeting the social needs of every child and on guiding his development so that he lives a richer life as a result of his learning.—GEORGE C. KYTE

☐ THE INNER DRIVE toward the beautiful in life is innate in all of us; it is one of the characteristics that differentiates man from the lower animals. Although creative efforts are more easily observed in young children than in adults, many aspects of adult life involve the use of creative ability. The architect who plans a house in terms of the needs of a particular family, the businessman who works out unique methods of reducing overhead or increasing sales, and the housewife who selects and arranges furniture in harmony with her own tastes, are using creative ability, although perhaps without knowing it. The fine arts afford an infinite number of opportunities for releasing creative abilities, for self-expression, and for the enjoyment of the beautiful in life.

The Fine Arts in the Elementary Curriculum

The fine arts seem to be firmly established as an integral part of the elementary-school curriculum. Music and art are no longer looked upon as peripheral subjects designed for a few pupils with exceptional talents or for those who expect to become professional musicians or artists. It is now generally recognized that music and art should play important roles in the lives of all members of our society and should, therefore, be included in general education.

State, county, and city school systems develop curriculum guides for music and art on the same basis that guides are developed for arithmetic, science, and other elementary-school subjects. Many books, pamphlets, and professional journals provide teachers with up-to-date developments in the teaching of these subjects. Although the supply of well-qualified teachers of music and art is limited, many elementary schools have special teachers for the intermediate and upper grades, and certification requirements usually include some work in music and art for all prospective elementary teachers.

Today, few people seriously question that the fine arts belong in the elementary-school program. However, music educators, art educators, and others responsible for planning the elementary-school curriculum recognize that careful planning and persistent efforts will be required in the years just ahead if these subjects are to make their maximum contributions to the kind of education demanded by the times. The urgency of the demand for scientific and technical education, the pressures for a more formal and demanding program of elementary education, the fear that our effort to provide educational opportunities for all American children may be resulting in the cultivation of mediocrity, the charge that modern programs of education foster anti-intellectualism, and the increasing tendency to ridicule the effort to produce well-rounded individuals are some of the factors that could bring about radical changes in the program of the elementary school.

Fortunately, a great deal of effort is being exerted to dispel the popular misconception that music and art are nonessential subjects and to show that they have significant contributions to make in passing on the social heritage of the past and in providing the means for adjusting to conditions of living in the future. It is recognized, for example, that we should use every means at our disposal to combat the Soviet threat of world domination and to build international understanding. In line with this objective, the State Department is sponsoring art exhibits and tours for musicians abroad.

The case for the fine arts in the elementary-school curriculum is presented in terms of their contributions to general education, which consists of what is judged to be essential for all children to learn. Three areas of general education to which the fine arts make unique contributions are esthetic growth, productive use of leisure time, and emotional development.[1]

Esthetic Growth

Art and music play an important part in the lives of everyone, not only professional artists and musicians. We are all constantly making choices that

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[1] See C. A. Burmeister, "The Role of Music in General Education," in *National Society for the Study of Education, Basic Concepts in Music Education* (University of Chicago Press, 1958), pp. 215–235.

could be made more intelligently if we had some training in taste. Examples of these are the choice of homes, furnishings, clothing, public buildings, civic improvements, and entertainment. The culture of a community is not judged alone by its industries and other evidences of wealth, but by its libraries, theaters, symphony orchestras, art museums, and schools. The development of cultural values is an important responsibility of the school and it should begin in early childhood.

The productive use of leisure

Hours in the work week decreased from 60 in 1900 to 40 in 1957 and it has been estimated that the figure will be 24 by 2000 A.D. In 1850, 13 per cent of all work output in the United States was done by human muscles; by 1957 this was down to less than 1 per cent. For the first time in history, science and technology have made it possible for the world's work to be done primarily by machines, leaving human beings with an increasing amount of leisure time on their hands to use as they see fit. Music and art have unique contributions to make to the constructive use of leisure time.

Emotional development

The times require the fullest possible development of the minds of youth, and there is an increasing amount of evidence that the emotions play an important role in the learning process. The common core of school experiences should provide for contact with those subjects and activities that appeal to the emotions. One writer has stated, "In the plainest language possible, we like music because it makes us feel good." [2] If music and art cause children to feel good about their school experiences, if the fun associated with music and art is not thwarted, these subjects will make a significant contribution to the general education of children.

Experiences relating to the fine arts are provided for elementary-school children through experience units that cut across subject-matter lines, through making them a part of many curriculum areas such as the social studies and the language arts, and through separate periods set aside specifically for concentrating on information and skills in the fine arts.

[2] C. A. Burmeister, op. cit., p. 221.

Music for Children

No one who observes a normal child can fail to notice that music has an appeal for him. The infant responds readily and happily to his mother's songs and lullabies; later, the child expresses his own feelings in chants and melodies. If he is given proper guidance, from adults who understand not only music but children as well, music will continue to be a means of helping him to express himself and to come to terms with the world about him.

Unfortunately, many children soon begin to rebel against school singing, note reading, and piano lessons. These children grow up without the rich musical heritage for which nature has equipped them. This is due not to the lack of a special talent or to any fault of music itself but to the presentation of music in the form of a patterned activity, far removed from the realities of their own living and natural interests.

The importance of skills and knowledge for furthering musical growth must, of course, be recognized. In our efforts to develop the techniques of music, however, we must not overlook attitudes and opportunity for musical expression. The varying degrees of musical ability found in any group of children make it necessary to include in the program a variety of music activities so that every child can find some activity he can enjoy and in which he can achieve some measure of success.

The changing concept of music teaching

The contrast between the old and the new practices in teaching music is as sharp as that between the old and new practices in teaching other elementary-school subjects. The older practices in teaching music expressed the prevailing theory of learning, which emphasized drill on isolated parts. In the teaching of arithmetic, this meant drill on number combinations; in reading instruction, it meant rote memorization of the letters of the alphabet; and in music teaching, it meant drill on notation apart from singing or playing an instrument.

The newer practices, on the other hand, reflect the influence of the organismic theory of learning. Evidence of this is found in the more recent courses of study and in books on the teaching of music. This approach is concerned with promoting the enjoyment and understanding of music through extensive, varied, and meaningful experiences. Facts and skills are considered to be as important as they ever were, but it has been found that they are best acquired through actual use in meaningful situations. Instead of being presented as isolated parts, they are brought into use when the need for them is clearly recognized.

Sound principles of learning and the music program

The principles of learning discussed in Chapter 2 apply to the music program as well as to other areas of the elementary-school curriculum. The music program should conform to the following principles:

THE PRINCIPLE OF CONTINUITY. Growth is a sequentially organized chain of events. The teacher must consider what has gone before and what is to follow in the growth of the child. Growth depends upon maturation of the organism as well as stimuli from the environment. In a program of musical experiences, the importance of readiness for learning must be emphasized at all levels. There can be no material that is appropriate for all children at any certain grade level; the material should be presented when there is musical readiness for it.

THE PRINCIPLE OF INTERACTION. The reaction of the child to his environment causes certain patterns of growth and behavior to be established, and these become a part of his developing personality. Human relations are improved in shared activities through such music experiences as playing in bands and listening to other children sing and play, as well as to record players, radio, etc.

THE PRINCIPLE OF BALANCE BETWEEN SECURITY AND ADVENTURE. Growth is the result of a shifting balance between security and adventure. Guidance should provide experiences that challenge the learner to more responsible behavior.

THE PRINCIPLE OF INDIVIDUAL DIFFERENCES. Variations in biological characteristics, acted upon by variations in environment, produce unique personalities. Individual differences are found among children of all age levels in ability to learn, physical growth, emotional and social maturity, and personality.

If the music program is well balanced, boys and girls can learn that music has something to offer everyone. The alert music teacher will surround each child with conditions for the full development of his potentialities.

THE PRINCIPLE OF LEARNING BY DOING. Learnings become part of the nervous system, in the form of memories, habits, attitudes, understanding, and skills. How well children learn anything depends on how actively they live it and how closely related the new experience is to experiences already lived and learned. Children enjoy singing nursery rhymes and other songs related to their everyday living.

THE PRINCIPLE OF LEARNING BY WHOLES. Learning situations are most effective when attitudes, knowledges, and skills are related in terms of some need or purpose that challenges attention and action. Children tend to react to situations as a whole, and parts have meaning only as they are related to the whole. For example, the parts that make up the melody *Annie Laurie*

have no meaning until they are put together to form the whole melody. After the children learn to appreciate the melody as a whole, work on the separate parts will have meaning.

THE PRINCIPLE OF LEARNING BY EXAMPLE. The attitudes and skills that we wish to develop in children should exist in the teachers of children. To develop in children an appreciation of tone quality, the teacher's own voice should be light and should approximate the quality of the children's voices. The teacher's personality, enthusiasm, and spontaneity have much to do with the child's reaction to all phases of music.

Music for every child

The democratic philosophy of education stressed throughout this book does not permit the policy of selection and elimination in elementary-school music. Principals, teachers, parents, and even the specialists in music are realizing that it is not the function of the elementary school to train children to be musicians; special music schools exist for that purpose. It is the function of music in the elementary school to develop those potentialities for growth in the enjoyment and participation in music that are inherent in every child; to stimulate in every child a feeling for beauty; to provide a means of self-expression; to enable him to use music to enrich all aspects of his life; to provide an outlet for imaginative thinking and feeling; and to equip him better to face the everchanging world about him.

Experiences that foster musical growth

Every child, regardless of his performance ability, should have the opportunity to participate in the music program. The child should be imbued with confidence so that he is willing not only to take part in the activities of the group but also to volunteer to interpret a musical thought by himself. To make this possible, a sufficient variety of experiences must be provided to meet the interests of all members of the group. Although no sharply defined lines can be drawn between them, the experiences that are used to promote musical growth usually include singing, listening, rhythmic experiences, play experiences, and creative experiences.

The most widely used approach to music for children is made through singing. This part of the program calls for attention to the selection of songs suitable for rote singing, to music reading readiness, to music reading for those groups who can reasonably attain it, and to opportunities for individual and group performance.

The teacher's selection of material for singing is particularly important. Too often children have been taught slight, inconsequential songs that can make no pretense of being good music—simply because the songs happened to fit into a particular unit of work. Songs about the postman, the fireman, the farm, Eskimos, airplanes, and railroad trains, written especially for children, fit into this category. Children need, instead, music that they will not outgrow, music that is part of our cultural heritage, music they can share with their families. Folk music helps fill these needs. This is music that is part of our culture, and, like our folk literature, ought to be taught to children. Landeck helps us to see how and why folk songs can be used:

These songs, dances and games came into being as a result of the experiences and needs of the human race. They were not founded on caprice or an eccentric vagary. For that reason they have a profound meaning for all who know them. The child who sings, "I got shoes, you got shoes, all God's chillun got shoes," unconsciously accepts the fact that, as an integrated member of the Universe, he too may walk all over "God's Heaven." The youngster warbling the popular "Driving Steel," for the moment becomes a member of the adult world where work is hard and responsibility great. These songs are never outgrown; they act as a connecting link between generations.

Folk songs reflect every emotion from joyousness to despair. They may bounce up and down on the nonsense level or walk a stately pace with an historical event. All types of songs have a place in the teaching repertory from the rowdy refrains of cowboy songs with their vigorous, hearty language to the gentle, nostalgic ballads. The choice of songs for different age groups depends mainly on the child's comprehension of the subject matter and his response to the song as a whole. In a repertory which includes a wide variety of songs, each will find its place without crowding out the others. It is the variety that will win the child's confidence and sustain his enthusiasm for music.

Words that seem difficult to adults are mastered without effort by youngsters. The repetition of chorus lines in sea chanties and spirituals makes them easy to sing, even at a first hearing. Before long children are vying for the solo lines of the verses without ever having been "taught" the words. It is not unusual for six- and seven-year-olds to go straight through the cumulative verses of such songs as the "Twelve Days of Christmas" without faltering. The rhythmic flow of words and music carries them along without conscious effort on their parts.

In the same way songs with nonsense syllables fascinate children and they twist their tongues around the delicious syllables expertly. To realize the pleasure such singing can give, you have only to see the faces of boys and girls as they intrepidly sing the "Swapping Song," with its "Wing-wang waddle, to my Jack-straw straddles, to my John Fare faddle, to my long way home."

The cultural backgrounds, habits, and emotions of all the peoples in the world are mirrored in their folk songs. What better way is there to introduce to the coming leaders of the world their international and interracial

friends! This kind of learning assimilated emotionally is, in lieu of actual experience, the most meaningful we can give them and therefore the most likely to remain with them.

The history and geography of our own country, too, come alive to the child who knows his great heritage of American songs, such as

> I've got a mule; her name is Sal;
> Fifteen miles on the Erie Canal

or the sea chanty "We're Bound for Rio Grande" and the lumbering song "Cutting Down the Pines." Through songs of this type the child learns of another era and of the work of men who helped to build our country and make it great. Cowboy songs, Negro spirituals, work songs, songs of soldiers and sailors, songs of the docks and the railroads and the rivers—all of these tell tales of America in the making.

The mood of these vivid songs projects itself into the singer and a resourceful teacher may use this effect to advantage. The interests of the class may be unified with a humorous story such as we find in the ballads "The Old Lord by the Northern Sea" and "The Farmer's Curst Wife," low spirits can be raised by the rollicking "doo-da's" of "Sacramento," or an obstreperous tumult can be calmed by the soothing words and melody of the cowboy who quiets his dogies in "Night Herding Song."

These songs originated in the hearts of the people rather than in the minds of scholars and artists. They have survived because they were loved and shared. For this reason, they do not require the trained tremolo of operatic stature but simply the affection of enjoyment. They are easily available and should be part of the equipment of every classroom teacher. An armamentarium consisting chiefly of folk songs will provide ample material for singing, games, rhythms, and dramatic play and will act as a springboard for creative work.[3]

Some useful sources of songs suitable for children are the following:

Book of American Negro Spirituals, edited by James Weldon and Rosamund Johnson (The Viking Press, 1925).

Git On Board, by Beatrice Landeck (E. B. Marks Music Corp., 1944).

Songs My True Love Sings, compiled by Beatrice Landeck (E. B. Marks Music Corp., 1947).

Nursery Songs from the Appalachian Mountains, compiled by Cecil J. Sharp (London, Novello and Co., 1933).

Ballads, Carols, and Tragic Legends from the Southern Appalachian Mountains, compiled by John J. Niles (G. Schirmer, 1937).

Songs of American Sailormen, edited by Joanna C. Colcord (W. W. Norton and Co., 1938).

Songs to Grow On, by Beatrice Landeck (E. B. Marks Music Corp., 1948).

Not all songs the teacher selects will be folk songs. Selections from classical music, such as Hansel and Gretel, should also be part of the music program. Our musical heritage is so rich and varied that slight and trivial fare can easily be crowded out.

[3] Beatrice Landeck, "Music With the Two to Nines," in *Children and Music* (Association for Childhood Education, 1948), pp. 13–15.

We forget that children's ideas and their urge to sheer physical activity are a much more powerful and vital stimulus than any music we can offer, and a far more rewarding one if we wish to capture their enthusiasm. We must therefore give them every opportunity to use their "material"—the material of movement—and train ourselves in recognizing their natural functional movements as our most important asset in teaching.[5]

How does a teacher initiate a modern dance approach in her rhythms work with children? Sheehy suggests "stunts" as an appropriate beginning. A textbook for teachers of young children has these suggestions:

> The young child is very much the individualist in his movement. The teacher of four-year-olds who gathers a few of them around her, helps them to take off their shoes, and indicates the wide area of free space in which they may dance, sometimes says, "Now, let's see how you will move from here way over to the windows." Some may hop, some twirl, some run, others half-skip, but each is likely to be quite different from the others. Or, they are stretched out on the floor, each a good arm's length from the other, when the teacher suggests that they move in their places. One rocks up and down on his haunches, another moves in a circle, with his feet and arms stretched straight out, still another rolls himself into a ball and seems to bounce in his place. Some children are free, easy, and responsive; others may be tight and inhibited. The teacher watches for movements that suggest release from tension, helps children to make more of them through her comments and occasionally through physical assistance. "Stretch as far as you can!" "Leap high." "That was interesting; can you do that with a straight back too?" Sometimes there is music, sometimes only the drum, sometimes just movement.
>
> Children who at four and at five have been encouraged to move freely, to let their bodies express their feelings, gradually develop interest in each other's forms, in experimentation with the pattern someone else is setting. The teacher may say, "Look at Don's way of doing it. Who else would like to try that?" She does not say, "This is the way to do it." Rather she accepts the integrity of each child's expression. Children who have had such understanding, such artistic teaching, do not become mere imitators at age seven and eight but retain the sense of creativity which is fundamental in the earlier years.[6]

Interest in the modern dance does not end with the primary grades. Recently a midwestern university sponsored a modern dance class for children on Saturday mornings—and was swamped with applications from elementary children at all grade levels. The space requirements for older children are greater; the use of an assembly hall or gymnasium, if these facilities are available, is advisable.

[5] Emma Dickson Sheehy, *There's Music in Children* (Henry Holt and Co., 1946), pp. 73–74.

[6] Roma Gans, Celia Burns Stendler, and Millie Almy, *Teaching Young Children in Nursery School, Kindergarten, and Primary Grades* (World Book Co., 1952), p. 305.

Art Education

The last decade has seen an intensified interest in the art program in elementary schools. College courses in public-school art have increased rapidly; opportunities for in-service growth of teachers have been provided in the form of workshops and consultant services; and art in the elementary school, once regarded as a "frill," is now regarded as an integral part of every good elementary-school program.

Pronounced changes have been taking place in the concept of what constitutes a good program of art education. The number of teachers who regard art as consisting primarily of drawing, of copying the work of others, and of conforming to rigid grade standards is rapidly decreasing. The modern approach to art education, based on the newer psychology of learning and the democratic philosophy of education, provides a more flexible program that allows each child to grow as an individual, provides opportunities for each child to satisfy his creative impulses, develops sensitivity to the beauty in art products that he makes and observes, and enriches his living through the cultivation of skills and understandings. The modern art program is concerned with making art functional and meaningful to children, with enlisting the aid of persons in the local community who have special competencies in art, with making art an integral part of the total school program, and with extending art beyond the school into the life of the home, the community, and the state.

Why teach art in the elementary school?

Art education can make valuable contributions to the principal objectives of the elementary school—to provide opportunities for every child to develop his innate abilities to the full extent and to contribute to the improvement of living in our society.

Art education provides a means for the child to express his ideas, feelings, and emotions; helps him to appreciate beauty in the world about him; and helps him to develop confidence in his own abilities.

Art education contributes to the realization of the social objectives of the elementary school by developing in children an awareness of the beauty or lack of it in home and community and by developing in them the skills needed for home and community improvement. Art education serves the community, state, and nation by developing the ability to use leisure time constructively and by providing opportunities for parents and children to work together cooperatively on projects relating to home and community beautification.

There are also therapeutic values in art. Cross children, tired children, tense children seem to relax as they work with art materials and to lose some of their aggressiveness, their fatigue, and their anxiety. Certain free media such as clay and fingerpainting are particularly beneficial. There is no scientific explanation as to why painting with fingers or modeling in clay is a release from tension, any more than we can explain the release afforded by an activity such as making mud pies. Yet it is a common observation on the part of teachers that the child who appears to be "tied up in knots" finds these free media relaxing, absorbing, and tension-releasing.

Some art work is therapeutic for a different reason. At times children may express their secret hopes, fears, or hostilities symbolically; the aggressive child may work off some of his aggressions in the gory battles that he paints, and the fearful child relieve his anxieties by drawing some of the things that trouble him. However, the teacher must be careful not to read too much into such pictures. Every child who draws a witch is not necessarily afraid of such creatures and every child who draws a plane spitting fire is not full of aggression. If art can help children express their feelings and so get rid of unpleasant ones, all well and good; elaborate interpretations of what they are doing are not necessary.

Who should teach art in the elementary school?

Whether the teaching of art in elementary schools should be reserved exclusively for teachers who have majored in art or art education during their pre-service preparation is largely an academic question. The fact is that teachers with this type of preparation are not available in sufficient number to provide art education for all elementary-school children. The writer is convinced that art education should receive more emphasis in the preparation of all elementary-school teachers and that the services of an art specialist should be available to all teachers in the elementary school. Elementary teachers without special preparation in art should take advantage of workshops in art education sponsored by colleges and universities and other in-service education programs through which they can become better skilled in teaching art and in handling art media.

Creative work

The child is a potential creator; his creativeness is born of real enthusiasm and joy of expression; he expends his energy on drawing and painting as he does in play. Creative education develops the child's own personal

thoughts and feelings. It is the part of education that places value on the child's individual reactions.

Creative art encourages children to think their own thoughts and to make their own interpretations; it gives children confidence in their own abilities; it encourages experimentation and promotes mental health.

Creative work repudiates a number of fallacies—that art should be confined to specific art periods, that uniformity in work should be expected of each child, that the object of the art program is to make a professional artist of each child, and that coloring-in hectographed pictures has value for the child.

Creativeness, once encouraged in the art program, will reflect itself in the child, and the process of creating will quicken his interests and enrich his outlook.

The classroom

Since art work is tied in with all other interests and is geared to suit the nature and scheduling of all the activities in which the pupils are engaged, each room is in itself an art room. The ideal room has good natural light, a sink with running water, ample storage space for supplies, electric outlets, good display space for the pupils' work, light-colored walls, and other facilities that encourage the production and display of creative work. Many schools lack these facilities, but much can be done to make any room a pleasing place for the children.

The classroom should show the work of children. However fine an exhibit may be, it loses significance to visitors and the children unless it represents the results of the children's own efforts. The classroom should have a "beauty spot," in which materials are exhibited and changed frequently. The exhibit can be a particularly nice arrangement of flowers, an object brought from home, a magazine cover, or a well-illustrated new library book.

Familiarity with good pictures broadens the child's appreciation, and the appeal of the room may be increased by a well-arranged display of good prints. If several good prints of the same size are available, a standard frame can be made and the prints changed often, the children being allowed to choose the picture they like. Catalogues of colored reproductions may be obtained from many distributors.

Experiences with many media

Art education in the modern elementary school includes not merely drawing but also work with crayons, fingerpainting, making hand puppets,

Arranging the Bulletin Board

A well-arranged bulletin board, displaying good reproductions of the works of famous artists or pictures relating to what the children are studying, can add to the attractiveness of a classroom. The sketches on these pages, contributed by Kenneth Lansing, of the University of Illinois, depict possible artistic arrangements. Professor Lansing makes the following suggestions with respect to arrangements:

1. Arrange the objects asymmetrically, rather than with opposite sides arranged so as to achieve regularity one with the other. The arrangement should balance, but it will be more interesting if it is not symmetrical. Do not measure for accurate arrangement; use eye judgment. Any irregularities will improve rather than spoil the display.
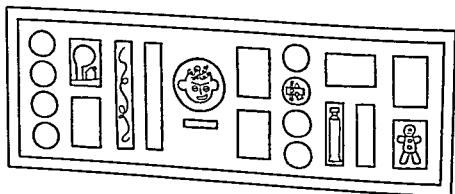
2. Printed materials, small objects, and important items are frequently shown with greater effect if they are placed upon a background that causes them to stand out. Irregular shapes sometimes make nice background because they attract attention. A background can be made from many materials. You can use aluminum foil, corrugated cardboard, string, yarn, bottle caps, cloth, dark sheets, burlap, and many other things. Yarn, paper strips, string, and bottle caps can be put together so that they form a shape.
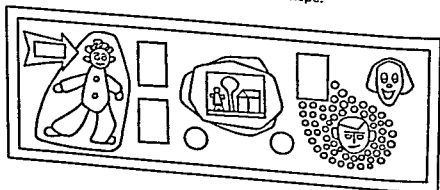
3. The display should be tied together and appear as a total unit rather than as a series of completely separate parts. If one color, texture, or shape is repeated throughout the display, it will help to unify the arrangement.

4. String or yarn can also help to tie an exhibit together.
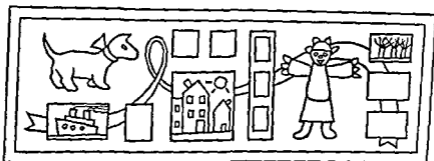
5. Sometimes it is interesting to place more emphasis upon one part of a display than upon the other parts. This can be done with bright colors, contrast, unusual shapes, etc.

6. Lines, colors, and shapes should lead your eye into the arrangement and not out of it.

7. When mounting pictures, the bottom margins are usually the widest. For a square picture, the top and side margins should be equal; for a vertical rectangle, the top margin should be wider than the side margin; and for horizontal rectangles, the side margins should be wider than the top.

8. Formal, symmetrical balance can also be used, but there should be some variety of sizes and shapes.

9. Labeling is important. Here are some suggestions:

   a. Keep in your file a set of simple, block letters of various sizes cut from tagboard to serve as patterns.

   b. Use a crayon for script and cut out.

   c. Use a paint brush, a lettering pen, or a felt pen.

   d. Use a variety of interesting papers, or cloth, yarn, string, rope, or straws for the letters.

   e. Give texture to letters by covering with organdy, burlap, sandpaper.

paper sculpture, work with colored chalk, and clay modeling. Courses of study and teachers' manuals contain detailed instructions for work in these and other areas.[7]

Many schools have been experimenting successfully with some interesting new media, and new ways of using the old. Mobiles of various kinds—constructions of delicately balanced movable parts that move rhythmically with air currents—are gracing elementary classrooms. Children are using materials on their paintings to convey the mood of the picture—such as soft feathers, scratchy sandpaper, beautiful pebbles or seashells, bits of moss, fabrics of different textures—which help to create "feeling" as well as "seeing" pictures. Wire in place of clay and paper is being used for modeling, and interesting modern designs are being created with this medium. Space designs challenge some pupils, as they work to fill the space on a block of wood or within a cardboard or metal container in an esthetic manner. These activities open up possibilities for fresh artistic production; if children's creativity seems blocked as they work with more traditional materials, these newer media will often stimulate fresh creative efforts.

Art and other curriculum areas

If art education is to function, as it should, in the lives of human beings, then art should be utilized with all school subjects. Here are some suggested experiences:

Reading

    a. Illustrate experience charts;
    b. Make individual books, including pictures for the words or thoughts;
    c. Paint illustrations for a story;
    d. Make a "movie" of a story. This can be done on large newsprint paper in book form. As the child tells the story, he can turn the pages;
    e. An exhibit of books and related objects—a book on hobbies, with a child's art hobby on display, for example—would be interesting.

Science

    a. Bring objects, such as leaves, seeds, or flowers, and arrange them in an exhibit;
    b. Draw leaves or flowers;
    c. Go on a walk to see colors in rocks;
    d. Make a booklet on creative flowers or real flowers;
    e. Make a decorative map of bird migrations;
    f. Show various seasons in crayon drawings;

[7] See Art Education in Oregon Elementary Schools (State Department of Education, Salem, Ore., 1953).

g. Take a walk in the park; notice the leaves, colors, buildings, etc.;
h. Make bird houses;
i. Model animals.

Social Studies

a. Draw a map of the community;
b. Make a house out of old boxes;
c. Make a mural of your community products;
d. Draw your school;
e. Have a puppet show of the history of your community.

Arithmetic

a. Make a border design of numbers;
b. Make a mural of four or five other countries' counting systems;
c. Use a ruler and draw a window box the correct size for a given window.

Health

a. Make a mural of foods;
b. Design a well-ventilated house;
c. Do large creative drawings of sports;
d. Make border designs of good foods;
e. Make cartoons of Mr. Good Health or Mr. Bad Health;
f. Make interesting large creative posters of health rules.

Safety

a. Draw a map showing your own safe route to school;
b. Sketch automobiles, stop signals, traffic officers, fire departments, etc.
c. Make posters of "Safety with Pets."

Music

a. Interpret music into art, both in color and form. Listen to an unfamiliar record and draw what the music suggests;
b. Make a mural of folk dancers;
c. Create costumes for a ballet;
d. Sketch costumes for the school musical programs—operettas, etc.;
e. Make large designs of musical symbols.

Teaching appreciation

The experiences of discovering, of enjoying, and of valuing should have a large part in the art program. These attitudes can be developed to a great degree through guidance in looking at good art, talking about selected examples of good design, and seeing art applied in the environment.

Seeing. Awareness is a basic element in appreciation. A child should be

exposed to and his attention directed toward many lovely things. The teacher and children can point out and discuss:

1. The changing colors in the sky,
2. The designs in wallpaper,
3. The color and design of dress material,
4. The applied design on cowboy boots,
5. The arrangement of packages on a shelf,
6. The design on chinaware,
7. The shape of a coffee cup,
8. The texture of cloth,
9. The shadows in the school hall.

Talking.

1. Discuss vases or containers for flowers and suggest possible flower choices, colors, arrangements, etc.

2. Bring things that are well designed, such as toy cars, cups, plastic combs, pencil boxes, rings. Show poor examples for contrast.

3. Discuss material suitable for house construction. Visit a house under construction.

Appreciating the Work of Others.

1. Choose for display the work of many artists who are recognized as outstanding. Let the children say what they like about the pictures.

2. Discuss illustrations found in books such as Burton's Little House, McCloskey's Make Way for Ducklings, McDonald's Little Island, Weisgard's Down Huckleberry Hill, and Jordan's Shoo-Fly Pie.

3. Have one child show his drawings.

4. Have children bring magazine pictures they particularly like.

5. Find examples of good color harmony.

6. Exhibit the folk arts and crafts of the community.

7. Display the work of artists of different races.

8. Exchange children's work among different schools.

If an alertness for and an appreciation of beauty in his environment are instilled in the young child, he will have gained an important source of genuine enjoyment for the rest of his life.

Art and community life

The art program, like the other parts of the elementary-school curriculum, is being related more closely to community life. Parents and other

interested citizens are invited to visit art classes, to come to the school to see exhibits of the art work of pupils, and to bring samples of their own arts and crafts for exhibition. *Children are encouraged to observe closely at home and in the community to get ideas for expression through different art media.* The following activities and many others can be used to enrich the art program and to relate it more closely to community living.

1. Make posters advertising the local flower show, rodeo, dog show, baseball game, etc.
2. Have an "art fair" or "craft day" or "I Made It" day, for which each child brings some object made by himself or someone he knows. *Arrange these objects in an attractive display. Perhaps the display will contain wood carvings, knitted sweaters, pottery ash trays, paintings, dresses, paper flowers,* hand hooked rugs, embroidered pillow cases, a footstool, a model car, a kite, a reed whistle, etc.
3. Offer your class bulletin board or wall space for a one-day showing of a local amateur artist's work.
4. Offer the children's work for an exhibit in a local store.
5. Make puppets and invite the parents to a puppet show.
6. Have a display of articles made in the community.
7. Ask local merchants for materials to display to point out new design in products. You might get the latest model toaster, iron, pyrex pie dish, coffee pot, toothbrush with colored plastic handle, perfume bottle, cigarette lighter, mop, etc. If you cannot assemble the materials, take the children to a hardware store and have them look for all the things with the "new look."
8. Take the class to visit an "art center."
9. Discuss house plans. Have the children bring pictures of their own homes and make a border for the chalkboard, using the pictures of actual houses.
10. Have a display of Indian art.
11. Cooperate with the Cub Scouts, Brownies, and Camp Fire Girls to display art work.
12. Make simple maps of the community showing routes children take in coming to school, going to movies, and going to the park.
13. Take sketching trips to draw local beauty spots.
14. Utilize the services of the Junior Red Cross in getting ideas for practical art projects for the children.

Industrial arts in the elementary curriculum

People use *raw materials and tools as they seek to meet their needs for food, clothing, shelter, transportation, communication, and the expression of esthetic impulses.* Industrial arts in elementary schools deals with the *processes used to make changes in the forms of materials to increase their value in meeting human needs.* This study helps boys and girls understand

the foundations on which our own culture and the cultures of other countries have been built.

In former times, children learned from firsthand experience how food was grown, harvested, and cooked; how houses were built from lumber cut from the forest; how clothing was made from wool and cotton; and how other basic needs were met by making changes in the raw materials of nature. Children today have few opportunities to learn at home how raw materials are changed to provide for human needs. The school has, therefore, assumed a share of the responsibility for helping children gain a better understanding of and appreciation for the materials in their environment, for people who do various types of work, and for the problems involved in changing materials into more usable forms.

Industrial arts overlap and supplement many curriculum areas in the elementary school, particularly the fine arts and the social studies. They are seldom taught as separate subjects.[8] They make valuable contributions to the general objectives of elementary education by giving pupils opportunities to (1) explore the organization, materials, processes, products, and occupations involved in industry; (2) develop recreational and avocational interests; (3) develop an appreciation of good craftsmanship; (4) increase the ability to buy, use, and care for the products of industry; (5) develop creative abilities; and (6) practice desirable social relationships.

Industrial-arts activities generally recognized as desirable for elementary-school children include (1) weaving with twine, cloth, wool, and reed; (2) constructing projects using wood, leather, plastics, cement, and clay; (3) studying industrial processes by use of visual aids and field trips; (4) using common hand tools and simple power tools; (5) sewing, preparing food, and studying the care of textiles; (6) doing recreational and avocational interests; animals; and (8) caring for plants and shrubs at home and at school.

Modern methods of teaching industrial arts exhibit the same characteristics as good teaching in other phases of the curriculum. They include (1) providing opportunities for learning by doing; (2) meeting the natural urge to investigate, manipulate, and build; (3) adapting experiences to the interests, abilities, and backgrounds of pupils; and (4) utilizing opportunities for integrating industrial arts with other areas in the curriculum.

Evaluation in the Fine Arts

Effective teaching in the area of the fine arts requires information concerning the capacities, strengths, and weaknesses of individual pupils. This

[8] See *Social Studies for Democracy's Children* (San Bernardino County Schools, San Bernardino, Calif., 1955), pp. 83–115.

information can be gained only by continuous and comprehensive evaluation. Standardized tests, teacher-made tests, and systematic observation are the principal means of evaluation. The information obtained is used both for guiding and motivating the pupil's learning and for improving instruction.

Measuring aptitudes for music

Several tests have been published that purport to measure innate musical ability rather than the results of musical training.[9] These tests are used for selecting pupils in the upper elementary grades for intensive training in vocal or instrumental music, to provide data for counseling with parents about the advisability of having their children take private lessons in music, and for counseling pupils about preparing for a career in music. The test results should be considered as one source of evidence, along with all other information about the pupil that has a bearing on his potential for successful experience with music, such as his previous success and level of motivation.[10]

Evaluating pupil progress in music

Less emphasis has been placed on objective measurement of pupil progress in music than in some other curriculum areas because of the fear that it might inhibit the pupil's creativity and interfere with his enjoyment of music. Specialists in educational measurements advise that evaluation techniques used in music and other fine arts avoid these hazards.

Pupil achievement in music consists of musical knowledge and understanding, skills of performance, skills of listening, attitudes, musical appreciation, and music habits. Standardized tests have been published for some of these areas.[11] However, these tests should be used only when it is evident that they correspond to the objectives of the course being taught. Teachers can usually rely largely on tests of their own construction which are related closely to the scope and objectives of the courses they are teaching.[12] The teacher can also do a great deal of evaluation by observing pupils systematically for evidence of ability to pay attention, to participate with enjoy-

[9] See *Seashore Measures of Music Talent* (rev. ed., RCA Manufacturing Co., 1939); Harvey S. Whistler and Louis P. Thorpe, *Musical Aptitude Test* (Series A, California Test Bureau, 1950).

[10] For specific information about published music tests see *Fourth Mental Measurements Yearbook* (Oscar K. Buros, ed., Gryphon Press, Highland Park, N. J., 1953).

[11] See M. Lela Kotick and T. L. Torgerson, *Diagnostic Tests of Achievement in Music*, Grades 4–12 (California Test Bureau, 1950).

[12] See "The Construction of Tests for Classroom Use," in T. L. Torgerson and G. S. Adams, *Measurement and Evaluation for the Elementary-School Teacher* (Henry Holt and Co., 1954), pp. 220–244.

ment, to sing in time, to memorize easily, to sing in correct pitch, and to use soft, smooth tones.

Measurement and evaluation in art education

A few tests have been published that purport to measure art ability. These tests deal with recognition of proportion, originality of line drawing, observation of light and shade, knowledge of vocabulary, problems in parallel perspective, problems in cylindrical perspective, problems in angular perspective, and recognition of color.[13] Specialists in educational measurement point out, however, that evaluation of a pupil's future promise in art should not be based on test data alone, but on a combination of his experiences in various art activities, in his art products, and his interest and motivation.

Published measures of achievement in art have been limited primarily to drawing scales.[14] These scales enable the teacher to compare pupil drawings with samples of standard quality and to assign ratings on the basis of such comparisons. However, most art educators and specialists on evaluation believe that concentration on the final product inhibits creative expression and interferes with the child's enjoyment of art as an avenue for self-expression.

This does not imply, of course, that the teacher will not use any standards to evaluate the growth of the child in art techniques. It means, rather, that her evaluation will take into account not only the degree of excellence of the product but also the extent to which personal growth and creative self-expression are taking place. What the experience is doing for the child constitutes the principal basis for evaluation of art experiences. The teacher is constantly looking for evidence regarding such matters as the following:

1. Do art experiences seem to provide an emotional outlet for the child?
2. Is he receiving satisfaction from his art work?
3. Is he trying to express something in his own way?
4. Is he growing in the ability to criticize his own work and to accept and use the criticisms of others?
5. Does he show an eagerness to improve his art techniques,
6. Does he engage in any type of art activity on his own initiative?[15]

[13] See Alfred S. Lewerenz, Tests in Fundamental Abilities of Visual Arts (California Test Bureau, 1927).

[14] L. W. Kline and G. L. Carey, Measuring Scale for Freehand Drawing: Design and Composition (Johns Hopkins University Press, 1933).

[15] For more detailed suggestions for evaluating pupil growth in art see T. L. Torgerson and G. S. Adams, op. cit., pp. 373–375.

Summary

1. The elementary-school program, if it is to be realistic, must provide a balance between creating and conforming.

2. Experiences in the fine and industrial arts may be provided for children in connection with experience units and other curriculum areas, and in separate periods.

3. Attitudes and opportunities for self-expression in music should not be overlooked in the effort to develop the techniques of musical performance.

4. The older practices of teaching music reflected the mechanistic concept of learning; the newer practices grow out of the organismic concept.

5. During the last two decades, research has done much to discount the value of isolated drill on notation as a method of learning to read music.

6. Recent courses of study and curriculum guides recognize that skills are important in music, but suggest that they can best be developed through use in meaningful situations.

7. Concepts of learning utilized in modern music teaching include the principles of (1) continuous growth, (2) interaction, (3) balance between adventure and security, (4) individual differences, (5) learning by doing, (6) learning by wholes, and (7) learning by example.

8. It is the function of the elementary school to develop those potentialities for enjoying music and participating in musical expression that are inherent in every child rather than to train a few children to be musicians.

9. Experiences that foster growth in music include (1) singing, (2) listening, (3) rhythmic experiences, (4) playing, and (5) creating.

10. There has been a decrease in the number of teachers who regard art as consisting primarily of drawing, of copying the work of others, and of conforming to rigid patterns and grade standards.

11. The modern approach to art education, based on the newer psychology of learning and the democratic philosophy of education, provides a flexible program, allows each child to grow as an individual, and develops the child's sensitivity to beauty in the art products he makes and in those he observes.

12. Art teaching in the elementary school is closely related to the general objectives of the whole elementary-school program.

13. There is a need for more preparation in art education for elementary-school teachers both at the pre-service and the in-service stages.

14. In a very real sense, every teacher is an art teacher, whether he recognizes it or not.

15. The services of an art consultant should be available to the teachers in every elementary school.

16. Creative art encourages children to think their own thoughts and

make their own interpretations; gives children confidence in their own abilities; encourages experimentation and promotes mental health.

17. The modern program of art education utilizes many media for expression; utilizes opportunities as they arise in connection with all curriculum areas; extends beyond the classroom into the home and community; and is evaluated in terms of what the experience is doing for the child.

18. Industrial-arts activities help boys and girls to understand the foundations on which our own culture and the cultures of other countries have been built.

19. Industrial-arts activities provide a valuable means of satisfying the natural urge to manipulate, investigate, and construct.

20. Industrial arts supplement other curriculum areas, particularly the fine arts and the social studies; they are seldom taught as separate subjects in the elementary school.

SOME PROBLEMS AND PROJECTS

1. Miss Wisneski, in grade 2, has some pupils who continually color or paint the same scene. It is a neat, conventional house, set in the middle of the paper, with a chimney out of which smoke is pouring, a sidewalk bordered with flowers leading up to the front door of the house, a tree on either side of the house, grass at the bottom, sky at the top, with the space between untouched. Miss Wisneski would like to see her pupils do some creative paintings instead of such stilted ones. Several of the following procedures might help her get results. Which ones are they?

   a. Have a directed art lesson in which pupils are instructed step by step on how to draw something different.
   b. Encourage pupils to do a good deal of fingerpainting, in which there is no emphasis on having a picture look like something.
   c. Display samples of art done by other children and urge her pupils to paint the same kinds of pictures.
   d. Evaluate her program to make sure that her pupils are having the kinds of experiences in the way of trips, stories, and the like that lead to creative art work.
   e. Encourage children to make designs in color, using the paints freely, and with no attempt to "make a picture."

Defend your selection of procedures.

2. *Should children ever be taught how to draw anything? When, if ever, should a pupil receive instruction in a specific skill? What does a teacher do when a pupil says, "How do you draw a boy running?"*

List some guiding principles that will help in answering the questions above. The readings on art education listed at the end of the chapter will help.

3. *Many psychologists regard a child's art work, when he has freedom to create as he wishes, as providing clues to the child's personality. Peter, for example, reveals his own impatience with limits by the way in which he paints, going beyond the confines of his paper to paint himself, his neighbor, and the furniture (although his teacher is patiently and kindly helping him to set limits). Henry, by contrast, paints little, timid strokes well within the border of the paper.*

Although the teacher must beware of unfounded conclusions and sweeping generalizations, some knowledge of the ways in which children reveal themselves in their art work can be useful. Read Alschuler and Hattwick, Painting and Personality, Vol. 1 (University of Chicago Press, 1948) and Lowenfeld, Creative and Mental Growth (the Macmillan Co., 1947) for help in this area. How may a teacher use a child's art work along with other indexes of personality?

4. *In his Creative and Mental Growth, Lowenfeld points out that there is a developmental pattern in the evolution of children's art work. The pre-school child, for example, draws objects anywhere on the paper, without reference to a base line. The child in primary grades has his houses, people, and trees standing on a line that never meets the sky, whereas the older child has the concept of a horizon.*

Study samples of children's art work at different age levels. To what extent do you find that they show the characteristics described by Lowenfeld?

What are the implications of Lowenfeld's approach for the teaching of art skills to children?

5. *The development of taste in art and music is an increasingly important problem in a world where the child is continually exposed to so much that is trite, ugly, or contrived. The level of the teacher's own taste is an important consideration here, for children are influenced by what the teacher values. The teacher who accepts only the classical composers such as Beethoven, or the Renaissance and Impressionist artists such as Raphael and Renoir, will probably not attempt to develop in pupils a taste for Stravinsky and Klee.*

Select a modern composer such as Stravinsky or Hindemith, or a modern

artist such as Klee or de Stael. Find out as much as you can about the characteristics of his work. Then listen to recordings or study reprints of the artist's work. How would you present this music or art to children? To what cues would you call their attention?

6. Miss Porter wants to rearrange her room so that her fourth-graders can have easy access to art materials. Instead of a period during which everyone draws or everyone paints, she wants to set up the room so that some pupils may paint, some may work with clay, some may color, and some may work on industrial arts, such as weaving or basketry. Assume that Miss Porter has screwed-down desks arranged in six rows. Draw a sketch of her classroom indicating where different art activities might be carried on. What suggestions do you have for making materials available for easy access?

7. Some music educators suggest that many of the songs in children's music readers are not examples of good music and constitute musical "baby food," to be discarded in a year's time. In this category would be songs about the postman, the policeman, the airplane, etc., written chiefly to tie in with a specific unit of work.

Examine a series of music readers. Which songs appear to have been written with a unit of work in mind, rather than musical quality? Which songs might become family songs that all would enjoy singing?

8. Folk songs are finding an increasingly important place in elementary-school music at all levels. Examine some collections of folk tunes in your library. What are some of the reasons for using folk music with children? Are there some folk tunes that are not suitable for use in the classroom? Should children sing songs dealing with death, or those in which poor grammar is used? Read Seeger, American Folk Songs for Children (Doubleday, 1948) for help in answering these questions.

9. Learning to know and like good music is one of the goals of music education for children. Which of the following procedures will contribute more effectively to this goal?

   a. The teacher sets aside time in her weekly schedule for a music-appreciation period. The children listen to good recordings of classical music and the teacher briefs them about the composer and his composition. Every few weeks the teacher tests the children by playing a composition, without telling the children the name, and asking them to write the composer and the name of the selection from memory.
   b. The teacher sets up a music corner with a record player or victrola which the children can operate themselves. Before school and during

the arts-and-crafts period, small groups of children gather round and listen to records of their own choosing. Sometimes they accompany the music with rhythm instruments in a box near by.

SELECTED READINGS

Books

ANDREWS, GLADYS, *Creative Rhythmic Movement for Children* (Prentice-Hall, Inc., 1954). Chapter 2, "Children and Creative Experiences," shows how creative experiences may be used as a way of learning.

BROWN, MAN, *Elementary Handcrafts for Elementary Schools* (The Exposition Press, 1956). Ties art activities very closely to school subject areas.

COLE, NATALIE R., *The Arts in the Classroom* (The John Day Co., 1940). Advocates releasing the creative abilities of children rather than imposing ideas upon them. Creative painting, clay work, block printing, rhythmic dancing, and creative writing are discussed.

ERDT, MARGARET H., *Teaching Art in the Elementary School* (Rinehart & Co., 1954). Suggests methods and techniques and provides illustrations.

GAITSKELL, CHARLES D., *Children and Their Art: Methods for the Elementary School* (Harcourt, Brace & Co., 1958). Describes fully how children's artistic capacities are developed and gives practical suggestions for using various art media.

KEILER, MANFRED L., *Art in the Schoolroom* (University of Nebraska Press, 1956). Presents the modern philosophy of art education; suggests materials.

LANDECK, BEATRICE, *Children and Music* (William Sloan Associates, 1952). Contains practical suggestions for the music program in elementary schools.

MYERS, LOUISE KIFER, *Teaching Children Music in the Elementary School* (Prentice-Hall, Inc., 1956). Outlines procedures for developing the capacity to make and enjoy music.

NATIONAL ART EDUCATION ASSOCIATION, *Research in Art Education* (The Association, 1956). Abstracts of studies in art education.

NATIONAL SOCIETY FOR THE STUDY OF EDUCATION, *Basic Concepts in Music Education* (University of Chicago Press, 1958). Learning theory in music education, music in general education, curriculum construction in music education, and evaluation in music education are discussed extensively in this excellent yearbook.

WARNER, RUBY H., *The Child and His Elementary School World* (Prentice-Hall, Inc., 1957). Chapter 5 deals with art education; Chapter 9 deals with music education.

Bulletins and curriculum guides

ASSOCIATION FOR CHILDHOOD EDUCATION INTERNATIONAL, *Children and Music* (The Association, 1948). A series of articles on music for children.

———, *The Arts and Children's Living* (The Association, 1948). Deals with art in everyday living and art in human relationships.

BOULDER PUBLIC SCHOOLS, *Creative Art* (Boulder, Colo., 1954). A curriculum guide for elementary schools.

GROSSE POINTE ELEMENTARY SCHOOLS, *A Music Program for the Grosse Pointe Elementary Schools* (Grosse Pointe, Mich., 1956). A curriculum guide for grades 1–6.

MISSOURI STATE DEPARTMENT OF EDUCATION, *Art for Elementary Schools* (Jefferson City, Mo., 1956). A curriculum guide for grades 1–6.

NORTH CAROLINA PUBLIC SCOOLS, *Music* (State Superintendent of Public Instruction, Raleigh, N. C., 1955). A resource bulletin for grades 1–12.

SCHULTZ, HAROLD A., and SHORES, J. HARLAN, *Art in the Elementary School* (College of Education, University of Illinois, 1948). Practical suggestions for the classroom teacher.

SELECTED FILMS

The following represent only a few of the films available in art and music. The teacher should consult the film service in the local school system, the state university, or the state department of education for lists of films in these areas.

Beethoven and His Music. A 13½-minute sound film that develops the relationship between Beethoven's environment and his personal response to it in terms of his music. Coronet Films.

Education through Art and Home Economics. A 12-minute sound film. Shows how planning and making clothing becomes a rich educational experience for junior high-school girls. Yeshiva University, N. Y.

Hand Industries of Mexico. An 11-minute sound film showing the technique of handicraft and its place in Mexican life. Coronet Films.

Harmony in Music. A 13½-minute sound film showing how harmony supports melody and rhythm to add vitality and greater enjoyment to music. See also *Melody in Music* and *Rhythm in Music.* Coronet Films.

Let's Draw with Crayons. An 11-minute sound film showing how to use and care for crayons and some of the interesting effects that can be achieved. See also *Let's Paint with Water Color.* Coronet Films.

The Zoo: Primary Art Activities. A 22-minute sound film. An elementary class visits the zoo. Back in the classroom the children discuss the animals and carry out various art projects. Iowa State University.

Curriculum
and
Evaluation

☐ THE EXPERIENCE of having his progress evaluated represents one of the most influential factors in the child's development. It determines to a great extent whether he will strive for real understanding or be content with memorizing answers; whether he decides that honesty is the best policy or that cheating will improve his marks; whether he learns to cooperate for the common good or to take advantage of his classmates; and whether he forms the habit of evaluating his own progress or of depending upon others to tell him whether he has passed or failed.

The older instructional practices were based on the idea that learning consisted primarily of the acquisition of knowledge and skills, and evaluation was limited to paper-and-pencil tests. Newer instructional practices have grown out of a newer psychology of learning, which emphasizes the modification of behavior, continuous growth, multiple learnings, and insight. In harmony with this concept of learning, evaluation is concerned not only with the subject matter learned but with attitudes, interests, work habits, physical development, and personal-social adjustment as well.

It has been suggested in earlier chapters that the type of elementary-school program demanded by our times involves a better understanding of the nature of learners and the learning process, a closer identifica-

Evaluating Pupil Progress

At some time or other, everyone passes judgment on someone or something. Yet the process of true and sound evaluation, involving as it does the weighing of truth against sound values, demands intelligence and mature thought.—WINIFRED E. BAIN

✦

tion of education with the demands of living in contemporary American society, and the development of teaching procedures that take into account the broader objectives of the modern elementary school. The broader objectives of the modern elementary school include command of the fundamental processes, preparation for democratic citizenship, releasing the creative abilities of children, and fostering physical and mental health. The teacher or principal who is adequately prepared to participate in the development of this type of elementary-school program needs a thorough understanding of the principles and procedures involved in a modern program of evaluation of pupil progress.

Meaning of Evaluation

The term *evaluation* refers to the accumulation of comprehensive evidence concerning the abilities, status, and problems of children by means of formal as well as informal procedures. It includes also the process of organizing and interpreting this information into a comprehensive description of the child against the background of his educational experience. The purpose of the whole procedure is, of course, to enable the teacher to provide educative experiences for which the child is ready and which meet his developmental needs.

The use of the term *evaluation* does not in any sense discount the value of educational measurement. Evaluation is a more inclusive term than measurement. Measurement is restricted to the quantitative aspects of education, whereas evaluation includes both the quantitative and the qualitative aspects. Furthermore, evaluation involves the use that is made of information obtained through measurement. Progress toward the achievement of some educational objectives can be measured; for other objectives we must evaluate or appraise pupil progress.

Purposes of Evaluation

The general purposes of evaluation in the elementary school are as follows:

1. To reveal to teachers what is happening to each child;
2. To motivate learning through furnishing pupils with information concerning success in various areas of the curriculum;
3. To furnish teachers with a means of appraising teaching methods, textbooks, and other instrumentalities of the educative process;
4. To provide a basis for continuous improvement of the curriculum;

5. To give pupils experience in evaluating their own progress;

6. To reveal the progress the school program is making toward the achievement of the accepted objectives.

An Adequate Program of Evaluation

The program of evaluation must be worked out through cooperative study and planning by the staff of each elementary school in terms of the needs of the local community and the children in the school. Several general principles, however, can be used as guides for the development of the program.

Evaluation procedures should be closely related to the objectives and activities of the curriculum

First, a comprehensive list of objectives is worked out by the teacher and pupils for the unit or assignment undertaken. These must be in harmony with the general objectives of education accepted by the school. Next, the activities through which the objectives are to be achieved are selected. The evaluation procedures used will be determined by the nature of the objectives and the activities. Thus, objectives, activities, and evaluation are dynamic, continuous, and integral parts of the educative process.

To the extent that objectives, learning activities, or evaluation become independent, they become formal and unrelated to the teaching-learning situation. Failure to realize the relation between objectives, activities, and evaluation has resulted in a program of teacher education in which the prospective teacher studies philosophy of education (objectives) in one course, methods of teaching in another, and evaluation in another. In public-school practice it results in one group formulating objectives and another group doing the evaluating. Consequently, tests are frequently given to pupils on materials they have not studied. Pupil progress should be evaluated by the persons immediately concerned with the educative process—the teacher, the pupils, the parents, and the local school staff.

The evaluation program should be comprehensive

The objectives of the traditional elementary school were, as we have pointed out, narrow and restricted primarily to the mastery of textbooks. The evaluation procedures used were correspondingly narrow, consisting primarily of paper-and-pencil tests. Much progress has been made in develop-

ing broader objectives and a greater variety of learning experiences, but progress in developing and using evaluation procedures to match the newer objectives and methods has been slow.

The evaluation of academic achievement is extremely important, but evidence concerning personal-social adjustment, physical development, habits of work, interests and attitudes, special aptitudes, growth in creative ability, and home and community background must also be available if the school is to do the best job possible in fostering the wholesome growth of children and preparing them for effective living in a democratic society.

Modern evaluation procedures attempt to obtain as complete a picture as possible of the individual. Although it is necessary to sample different aspects of behavior at different times by using a variety of instruments and procedures, interpretations of behavior relating to specific goals must be made in terms of the total personality. For this reason it is important not only to find instruments and procedures that yield accurate information concerning the various aspects of child growth but also to interpret these various indexes of behavior against the whole educational background of the child.

Evaluation of pupil progress should be continuous

Evaluation is not something that is done after teaching has been completed; it takes place simultaneously with teaching and learning. This is the kind of evaluation that is found everywhere in life except in certain classrooms. Compare the evaluation of a new employee in a hardware store with the kind practiced in many schools. If the owner of the store used the procedure common in classrooms, he would put the new man to work and for four and one half months would pay no attention to his progress. Then, at the end of the period, an entire week would be set aside for evaluating the new employee. The doors of the store would be locked and no selling would go on until the employer decided whether or not the new man could answer 70 per cent of the questions he had asked him. Anyone who has owned a hardware store or worked in one knows that the above procedure is not used; yet anyone who has taught in a school or has attended one will recall experiences with evaluation procedures corresponding roughly to the above description.

The evaluation process should go on during all the time that the teacher can observe the pupil, and not merely at stated intervals when tests are given or report cards sent to parents. Not only results of paper-and-pencil tests but every detail of behavior that the teacher can observe should be material for the evaluation process. It is during the elementary-school period that the process of evaluation reveals differences in aptitudes, abilities, achievements,

interests, and environmental backgrounds that determine to a large degree the educational needs of high-school and college youth.

Evaluation of pupil progress should be cooperative

Pupils should be encouraged to engage in self-evaluation. This represents an important phase of the child's education. Failure to develop in children both the desire and the ability to evaluate their own progress or at least to participate, under the guidance of the teacher, in the process has resulted in many types of educational weaknesses. It has produced high-school and college youth who must always wait for the verdict of the instructor concerning their progress—even graduate students who constantly ask instructors, "Is this the way you wanted it done?" It is responsible for much of the cheating on examinations for the purpose of deceiving the instructor and getting a higher mark. Furthermore, an authoritarian system of evaluation is hardly conducive to the development of a nation of adults capable of assuming the responsibility for their own behavior and habituated to evaluating their own efforts—characteristics essential in a society that gives allegiance to the democratic ideal.

> The role of the pupil in evaluating his own growth has not been sufficiently realized and utilized by teachers. The pupil can aid in the evaluation of his own growth by saving samples of his creative work, for example, in drawing and in writing. He can provide anecdotes of his behavior which the teacher may include among her records. He can list on special record forms the names of books he has read or radio programs that he has heard so that his interests and activities as operating through these media may be appraised. In conference with the teacher and with other members of his class, the pupil can aid in estimating his own growth in such group activities as leadership, initiative, and cooperation in class enterprises.[1]

Grim[2] mentions several advantages of pupil participation in evaluating progress. The pupil learns to become increasingly independent in appraising his own progress, problems, and growth. Through daily sharing and participating in the total learning process, he will use the data gathered in the evaluation program to guide his progress more effectively toward his goals. It is, therefore, not necessary for the pupil to wait for a monthly grade or report to determine his growth status or pattern. The school is serving a vital function when it enables the pupil to learn better how to judge and place values upon his daily adjustments to life.

[1] Department of Supervisors and Directors of Instruction, *Newer Instructional Practices of Promise* (National Education Association, 1939), p. 311.
[2] Paul R. Grim, "Youngsters Take a Hand," *Educational Leadership*, April 1947, pp. 438–441.

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The results of evaluation should be used
for continuous curriculum improvement

Many elementary schools have embarked upon ambitious testing programs. The data have been tabulated and treated statistically to determine the range, the median, and the standard deviation for each subject at each grade level. These results have been filed for future use or perhaps published in an educational journal, while the program of instruction has continued as static and as rigid as before. And this practice frequently has carried the title of educational research.

Educators have been charged, with some justification, with publishing more research studies that have no relationship to needs of practitioners than all of the other professions combined. Research and experimentation are necessary, of course, in public education, but research that warrants its cost must result in the improvement of educational opportunities offered to children.

Evaluation should be concerned with the progress pupils are making in the direction of the values sought for them. Every phase of the curriculum should, therefore, be under constant evaluation in terms of the major values sought. The curriculum organization should be flexible enough to enable each teacher to change a course of action whenever the results of evaluation indicate that a change is desirable. If evaluation reveals that several pupils in the third grade are not ready for the reading materials that are in use, the teacher should feel free to give them reading materials for which they are ready; if evaluation reveals that the arithmetic content is too difficult for certain pupils, the teacher should feel free to adjust the program to their needs and abilities, regardless of grade standard or minimum essentials.

Some teachers are using evaluation for still a different purpose. They are evaluating pupil growth to help decide questions of content and method of teaching. For example, a school system had been debating whether to change from a basal to a co-basal reading system, in which they would use more than one reading text. Some of the first-grade teachers were in favor of the change; some were not. Ten of the teachers decided to do some research to see which way was better. The new system was tried in five of the classrooms and the children in these classrooms matched with children of similar intelligence and social class background in five classrooms using the other method. A committee of first-grade teachers planned evaluation techniques to include standardized reading tests, a record of free reading, and anecdotal records that might reveal attitudes toward reading. At the end of the year, an evaluation expert from the state university helped them to apply statistical procedures to see whether one method of teaching reading had been more effective than the other.

Sometimes an individual teacher rather than a team does research upon a curriculum problem. Miss Densford was interested in seeing whether a social-studies unit she had carefully planned would have any effects upon the ability of her seventh-grade class to think critically. She tested the pupils before she began teaching the unit and then following her teaching.[3] Then she treated the raw scores statistically to see whether there was a greater than chance difference in achievement before and after her experiment.

Teachers in many parts of the country are finding that the study of curriculum problems using the same techniques as the research scientist is an exciting and rewarding venture. This is not an activity for all teachers, but those who are interested will find that materials are beginning to appear in the literature which will help them with the practical problems of conducting research in the classroom.[4]

Factors that Need to Be Evaluated

The final criterion by which school practices must be evaluated consists of what is happening to the child. It is the function of evaluation, therefore, to reveal the potentialities of each child, the factors that are promoting and retarding his progress, and a factual basis upon which the teacher can determine educational experiences that will best meet his needs. In the following pages ten major factors in pupil growth are examined. An effort is made in the following pages to give at least a partial answer to three questions regarding each factor: (1) *Why* is it important to evaluate this factor in pupil growth? (2) *What* specific items relating to this factor need to be evaluated? (3) *How* can the teacher evaluate the growth of pupils in terms of this factor? It should be understood, of course, that these factors of pupil growth are interrelated and that the teacher has the responsibility for interpreting and synthesizing the information obtained into a composite picture of the child against the background of his total learning environment.

Mental ability or academic aptitude

Few problems in education have aroused more controversy than the nature of intelligence, the relative influence of nature and nurture on intelligence, and the quality that is actually measured by intelligence tests. It is easy to become so involved in a theoretical discussion of these problems that

[3] O. Buros, *Fourth Mental Measurements Yearbook* (Gryphon Press, Highland Park, N. J., 1953), is an invaluable source of help in selecting tests.
[4] See, for example, F. Barnes, *Practical Research Problems: A Guidebook in Research Methods for Practitioners in Education* (Office of Superintendent of Public Instruction, Springfield, Ill., 1958).

the more immediate problem of what use to make of information relating to the abilities of children is entirely overlooked. This is not to say that the problems listed above are unimportant. In addition to gaining a clear understanding of these problems, however, the teacher in the modern elementary school has the obligation to use information relating to the abilities of her group of children in such a manner as to foster the optimum growth of each toward the realization of those personal and social values for which the elementary school in democratic society accepts responsibility. What the teacher needs is not merely a single index of the general mental ability of the child but information concerning the various types of ability he may possess. Very little progress can be made toward individualizing instruction in the several curriculum areas until information is obtained regarding the various aptitudes of the children involved. Each pupil needs to be evaluated to determine the educational directions and distances he is best equipped to travel. Instead of a single grade standard for reading, for example, the teacher needs information concerning the reading achievement that can be expected from each child.

Evaluation of the abilities of children in modern elementary schools is for the purpose of guidance rather than selection. At a time when 75 to 80 per cent of the youth of high-school age are in school, and when some state universities are required to admit anyone possessing a high-school diploma, the need for evaluation for the purpose of *selecting* students is extremely small. The teacher in the public schools and colleges has been deprived of the right to say "no" to the plea of any individual for educational opportunities. This right is reserved for a minority of institutions of higher learning and a relatively small number of private schools at the elementary- and secondary-school level. The function of evaluation in this situation is to determine as objectively as possible the kind of educational opportunities from which the individual can profit most.

The oldest and best known instruments in this area yield a single index of mental ability—the intelligence quotient. The Terman-Merrill revision of the Stanford-Binet Scale is regarded as a good single measure of intelligence. Since this is an individually administered test and requires the services of an expert, most schools can use it only for special cases, if at all. The Otis Quick-Scoring Mental Ability Test, the Kuhlmann-Anderson Tests, and the Pintner General Ability Tests are widely used for group testing of general mental ability.

Many schools prefer tests that provide information concerning both language and nonlanguage factors of scholastic aptitude. The California Test of Mental Maturity and the Cornell-Coxe Performance Ability Scale are examples of this type.

Care must be taken in interpreting the results of intelligence tests. An

intelligence test cannot measure capacity but only intellectual functioning. Many children from impoverished environments, denied the advantages of experiences in early childhood that would provide them with the percepts and concepts that contribute to the growth of intelligence, do not perform well on tests of intelligence. Yet phenomenal gains have sometimes been reported after such children have been exposed to an enriched environment for a year or more.

While we do not have reliable evidence as yet on changes in American intelligence, two interesting trends have been noted. One is the drop in children's intelligence quotients reported in large cities as upper- and middle-class families move out to the suburbs or place their children in private schools. The public schools in cities like New York and Los Angeles are now enrolling a majority of lower-class children, many of whom come to school not knowing the English language, or come from homes where opportunities for "book-learning" and a drive to do well in school are lacking. Because these children score low on intelligence tests, it should not be assumed that they are stupid and cannot learn. It does mean that schools enrolling such pupils have a heavy responsibility to provide a rich learning environment that will help to compensate for their impoverished backgrounds.

Evaluation of achievement in the various curriculum areas

Since the program of the elementary school has been extended and enriched, the need has been increasingly recognized for evaluation procedures that measure more than the memorization of facts and the development of mechanical skills. Techniques for measuring factual knowledge and fundamental skills have been worked out and used fairly well in classrooms, but, too frequently, teachers have assumed that after they had measured factual knowledge and skills there was nothing left to measure. In traditional testing procedures, very little emphasis was given to the measurement of understanding. There is no question about the importance of measuring progress in the fundamental skills and in other phases of the conventional school subjects, but understanding is also important, and, unless teachers learn how to evaluate pupil progress in understanding, in seeing relationships, and in making practical applications of facts and skills learned to the solution of problems of living, these important aspects of the education of the child will continue to be neglected. The following are some of the procedures used in evaluating achievement:

STANDARDIZED ACHIEVEMENT TESTS. When used wisely, standardized achievement tests furnish a basis for diagnosis of learning difficulties and focus attention on weaknesses in the curriculum and in teaching procedures.

Certain limitations of these tests must be kept in mind, however. First, the norms are prepared on the basis of the median scores of many pupils in many school systems. These may be suitable standards of attainment for the average pupil but too high for slow pupils and too low for pupils who are above average in mental ability. Second, it is difficult to find a standardized test that parallels the objectives and grade placement in the local school. Third, if the teacher believes that she is to be rated on the basis of the scores made by her pupils on standardized tests, she is likely to teach for the tests, to limit her teaching to drill on the textbook materials emphasized by the tests. This misuse of standardized achievement tests has tended to crystallize outmoded methods of teaching, has prevented teachers from taking advantage of opportunities to relate learning to living, and has retarded efforts to make adequate provision for individual differences among pupils. Fourth, unjustified comparisons of one child with another have been made on the basis of single test scores without regard to differences in backgrounds and potentialities for learning. Unwholesome competition of individual against individual and school against school and even teacher against teacher has been fostered by this misuse of standardized tests.

If the limitations mentioned above are kept in mind, standardized tests of achievement can be used profitably in those subjects in which grade placement and instructional objectives vary least from classroom to classroom. Even in these subjects such tests should be used for guidance purposes and not for passing or failing, for rating teachers, or for regimenting pupils to a single standard of achievement. Some widely used standardized achievement tests are Sequential Tests of Educational Progress, Stanford Achievement Tests, Progressive Achievement Tests, Metropolitan Achievement Tests, and Iowa Every-Pupil Tests of Basic Skills.

TEACHER-MADE TESTS. A comprehensive treatment of the problem of test construction is beyond the scope of this chapter.[3] Although teacher-made tests usually lack the technical refinement of standardized achievement tests, they should probably be used more widely than they are, for several reasons. Teacher-made tests fit the instructional objectives of the specific group better than standardized tests. The work of constructing objective tests benefits the professional growth of the teacher. The cost of standardized tests limits their use in many schools. Standardized tests are available only for whole subjects or large units of subject matter and can usually be adapted for evaluation of achievement only at the beginning and the end of a semester or year. Teacher-made tests can, on the other hand, be used for continuous evaluation.

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[3] Information is available for this purpose in many excellent books written by specialists in the field of evaluation and measurement. See, for example, "The Construction of Tests for Classroom Use," in T. L. Torgerson and G. S. Adams, *Measurement and Evaluation for the Elementary School* (Henry Holt and Co., 1954), Chapter 10.

PROCEDURES FOR EVALUATING UNDERSTANDING. In every curriculum area procedures are available for evaluating understanding. These include systematic observation of pupils from day to day, the recording and interpreting of these observations by means of anecdotal records, pupil interviews, examination of pupils' work products, and properly constructed paper-and-pencil tests. Written tests and other formal instruments of appraisal make unique contributions, but day-by-day observations by alert teachers provide the most significant evidence of pupils' understanding.

Personal-social adjustment

The elementary school has always had the responsibility for teaching the child to read, to write, to spell, to use language effectively, and to gain proficiency in the use of numbers. The modern elementary school accepts this responsibility and, from all accounts, does a better job of teaching these basic skills than has ever been done before. Along with this responsibility the modern elementary school is interested in the personal-social adjustment of the child. Does he work well with others? Is he pleasant and cheerful? Does he stick to a task until it is finished? Does he listen courteously to others? Is he thoughtful of smaller children? In short, the modern elementary school is interested in the kind of person the child is becoming as well as in his progress in academic subjects. To meet this obligation for serving the whole child, the school needs complete and accurate information. Procedures for evaluating personal-social adjustment include the following:

PERSONALITY TESTS. Traxler explains the uses of results of personality tests as follows:

> Two important uses of these tests are (1) to stimulate the pupils to evaluate critically their own personality characteristics, and (2) to serve as a point of departure in conferences between counselors and individual pupils. Personality tests are also helpful in locating pupils who are poorly adjusted and unhappy, and who need guidance in making emotional and personal adjustment. Tests are sometimes more successful in discovering such cases than observational or interview procedures, since many maladjusted pupils are so repressed that they give little outward evidence of poor adjustment. If scores on personality tests indicate that there are such cases in the school, a wise counselor will not accept the results unreservedly but will verify them by means of careful observation and well-planned interviews with the pupils. For the purpose of records of growth, anecdotal records, behavior descriptions, and sociometric devices seem preferable to existing personality tests.[6]

Personality tests suitable for use in elementary schools include the California Test of Personality, Aspects of Personality, and Personal Data Sheet.

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[6] Arthur E. Traxler, *Techniques of Guidance* (rev. ed., Harper & Brothers, 1957), p. 108.

RATING SCALES. Personality tests are based on the reaction of the individual to a series of questions or situations. Rating scales, on the other hand, are executed by counselors, teachers, parents, or others. Rating scales have the advantage that they can be used with children who are too young to read questionnaires or evaluate their own reaction to situations. Another advantage lies in the fact that persons are less likely to be biased in their judgments of others than they are in estimates of themselves. The reliability of rating scales can be increased by having several persons rate the same individual and combining the ratings.

Behavior rating scales suitable for use in the elementary school include the Haggerty-Olson-Wichman Behavior Rating Schedules, the Winnetka Scale for Rating School Behavior and Attitudes, and the Freeman-Kawin Teacher's Rating Scales for Pupil Adjustment.

ANECDOTAL RECORDS. The anecdotal record is a specialized form of incidental observation. It is a description of the child's conduct and personality in terms of frequent, brief, concrete observations of the pupil made and recorded by the teacher. On pages 395-397 there is reproduced an anecdotal record of a six-year-old child, prepared by Clara O. Wilson,[7] during a summer session at the University of Nebraska.

In discussing the characteristics of a good anecdote, Traxler[8] warns against mixing facts with opinion. He states that objectivity is essential, and he draws a parallel between good anecdotes and news reporting. A good newspaper contains both news items and editorials, but the two are carefully separated. In an anecdote the facts should be stated accurately, objectively, and dispassionately. Interpretations and recommendations may be included, but these should be in a separate part of the report. The values of anecdotal records include the following:

1. They contribute to an understanding of the personality of each child.
2. They direct the attention of teachers toward individual pupils.
3. They provide information for pupils to use in self-appraisal.
4. They provide new staff members with important information about pupils.
5. They provide appropriate materials to be forwarded with a pupil when he moves to another school.
6. They provide evidences of growth in work-study habits.
7. They encourage teachers to become interested in phases of child growth other than achievement in school subjects.

The limitations of anecdotal records include the following:

1. It is difficult for busy teachers to record behavior incidents accurately.

[7] Clara O. Wilson, "Evaluation of Child Growth: An Anecdotal Record," *Educational Method*, January 1941, pp. 178–181.
[8] Arthur E. Traxler, op. cit., p. 131.

AN ANECDOTAL RECORD OF ANN. AGE: 6 YEARS, 2 MONTHS. TIME: SUMMER SESSION

Give Terse Accounts of Incidents Showing Growth	First Week	Second Week	Third Week	Fourth Week	Fifth Week	Sixth Week
In caring for health and proper functioning of physical organs through Appropriate food and liquid Note height every 6 months, weight every 3 months, overweight every month	Height—45½ in. Weight—45 lb. Seems well cared for	After discussion of needed liquid, Ann drinks more water—probably due also to heat	Enters discussion of good foods—tells of breakfast of orange juice, cereal, milk			
Suitable clothing and shelter Note comfort and cleanliness Note heat, light, safety, ventilation and cleanliness	Wears more clothing than needed Clean	Weather hot—Ann now wears clean sunsuit each day	New shoes—large enough Weight bearing line OK (heel to big toe)	Very comfortable clothing—hangs from shoulder	Brought dry shoes for rainy day	
Regular and adequate elimination	School program provides for regularity of toilet habits	No record available				
Avoidance of poison from colds, infections, poor food, etc.	No colds or infections evident	Seems well cared for	Hair, nails always clean Carries Kleenex in pocket	No evidence	Refused unwrapped gum offered by Dan	No evidence

RATING SCALES. Personality tests are based on the reaction of the individual to a series of questions or situations. Rating scales, on the other hand, are executed by counselors, teachers, parents, or others. Rating scales have the advantage that they can be used with children who are too young to read questionnaires or evaluate their own reaction to situations. Another advantage lies in the fact that persons are less likely to be biased in their judgments of others than they are in estimates of themselves. The reliability of rating scales can be increased by having several persons rate the same individual and combining the ratings.

Behavior rating scales suitable for use in the elementary school include the Haggerty-Olson-Wichman Behavior Rating Schedules, the Winnetka Scale for Rating School Behavior and Attitudes, and the Freeman-Kawin Teacher's Rating Scales for Pupil Adjustment.

ANECDOTAL RECORDS. The anecdotal record is a specialized form of incidental observation. It is a description of the child's conduct and personality in terms of frequent, brief, concrete observations of the pupil made and recorded by the teacher. On pages 395-397 there is reproduced an anecdotal record of a six-year-old child, prepared by Clara O. Wilson,[7] during a summer session at the University of Nebraska.

In discussing the characteristics of a good anecdote, Traxler[8] warns against mixing facts with opinion. He states that objectivity is essential, and he draws a parallel between good anecdotes and news reporting. A good newspaper contains both news items and editorials, but the two are carefully separated. In an anecdote the facts should be stated accurately, objectively, and dispassionately. Interpretations and recommendations may be included, but these should be in a separate part of the report. The values of anecdotal records include the following:

1. They contribute to an understanding of the personality of each child.
2. They direct the attention of teachers toward individual pupils.
3. They provide information for pupils to use in self-appraisal.
4. They provide new staff members with important information about pupils.
5. They provide appropriate materials to be forwarded with a pupil when he moves to another school.
6. They provide evidences of growth in work-study habits.
7. They encourage teachers to become interested in phases of child growth other than achievement in school subjects.

The limitations of anecdotal records include the following:

1. It is difficult for busy teachers to record behavior incidents accurately.

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[7] Clara O. Wilson, "Evaluation of Child Growth: An Anecdotal Record," *Educational Method*, January 1941, pp. 178-181.
[8] Arthur E. Traxler, op. cit., p. 131.

AN ANECDOTAL RECORD OF ANN. AGE: 6 YEARS, 2 MONTHS. TIME: SUMMER SESSION

Give Terse Accounts of Incidents Showing Growth	First Week	Second Week	Third Week	Fourth Week	Fifth Week	Sixth Week
I In caring for health and proper functioning of physical organs through Appropriate food and liquid Note height every 6 months, weight every 3 months, overweight every month	Height—45½ in. Weight—45 lb. Seems well cared for	After discussion of needed liquid, Ann drinks more water — probably due also to heat	Enters discussion of good foods— tells of breakfast of orange juice, cereal, milk			
Suitable clothing and shelter Note comfort and cleanliness Note heat, light, safety, ventilation and cleanliness	Wears more clothing than needed Clean	Weather hot — Ann now wears clean sunsuit each day	New shoes — large enough. Weight bearing line O.K. (heel to big toe)	Very comfortable clothing— hangs from shoulder	Brought dry shoes for rainy day	
Regular and adequate elimination	School program provides for regularity of toilet habits	No record available				
Avoidance of poison from colds, infections, poor food, etc.	No colds or infections evident	Seems well cared for	Hair, nails always clean Carries Kleenex in pocket	No evidence	Refused unwrapped gum offered by Dan	No evidence

AN ANECDOTAL RECORD OF ANN (Continued)

	First Week	Second Week	Third Week	Fourth Week	Fifth Week	Sixth Week
II *Give Terse Accounts of Incidents Showing Growth*						
Rhythm of activity and rest	School program offers short rest times. Reports on 10 hr. sleep	Does not seem to be as vigorous as some children. Very alert	After activity rests alone for few minutes	Seems to need short rest period — then rejoins group		
In meeting social needs and relationship through Healthy relationship in the group	Shy in group. Close friendship with Betty. Withdraws if several join group	Shyly enters small-group activities. Betty takes care of her	Much more free in group. Pleased to be chosen	Helped plan trip to farm. Contributed	Timid about riding pony — watched and was last one to ride. Other children baby her	Takes turn nicely. Helps another child. Helps plan party
Affection and sense of security	Comes with father and Betty—cry secure with them. Later comes with Betty	Delighted that father visited. Waits to go home with him each day	Comes with Betty's father. Secure. Pleased that mother visited. Secure in love of parents	Absent one day— very happy to be back	Shyly affectionate with teacher	More secure daily. Cares for little visitor
III *In meeting personal needs through wide experiences with an increasing amount of self-direction. In investigating and gathering useful info*	No evidence	Helped care for turtle; asked about food cost. Following conversation found out from parents about litte...	No evidence	Trip to farm planned. Reported, "No rain, we can go — I heard the weather report" Enjoys books	Reported on ponies day after ride. Cost and care. Showed picture	Brought good ideas for party home

In gaining "basic skill"	Interest in pictures	Tells story about series of pictures. Recognizes names	Good stories about sequence of pictures. Locates labels of pictures. Counts scissors. Wrote name on board	Dictates caption for picture. "Reads" it. Seems to memorize well. Counts books, etc. Enjoys books		Pleased with pre-primer. Can read two pages. Very enthusiastic. Counts party materials
In better ways of organizing knowledge and using it in thought	No evidence		Told of catching fireflies, D questioned her, next day she brought two in bottle	Discussed trip to farm—especial interest in young animals. Reasoned she could have small pets in city	Inquired about cost of pony—Figured she had no place to keep one but wanted it	Dictates experience story about party (4 lines). Enjoys reading it. Interested in cost. Likes books. Works on writing name on board
In creative expression in language, art, and music	Watches children, but enters little	Loves easel painting. Uses much color. Sings shyly	Crayons—then returns to paint. Expresses self well—good vocabulary	Very spontaneous with paint—laughs with children. Enters into dance	Creates own simple dance to music. Excellent listening attitude	Excellent vocabulary—expresses self well. Enjoys dance
In carrying out activities	Follows suggestions shyly	Enters most group activities. Seems tired near end of school	Persistent worker—good attention. Grows tired of woodwork but returns to finish it	Serves well on little committee. Not as vigorous as some children. Attention span long	Persists in woodwork in spite of L's influence to stop	Helped party plans—Took responsibility well—A little shy when guests came
In broadened interests and more clearcut attitudes	Much interest in paints	Much interest in farm and young animals	Evident interest in woodwork and tools		Interested in where other children lived—especially children from other towns—interest in rec—	Interest in dance records

Reporting to Parents

This cartoon unwittingly illustrates the shortcomings of traditional ways of reporting to parents. Letter grades do not tell the father whether his "stupid" son is doing poor academic work because he is poorly motivated, lacks the basic skills necessary to do successful work in his grade, or is really low in intelligence. If the latter is true, and the boy is doing his best, then grading the boy in comparison with other pupils is, in a sense, punishing him for hard, devoted work.

Many schools are abandoning the traditional report card in favor of teacher-pupil conferences. These enable the teacher to report more fully to the parent on the child's progress and to explore possible reasons for poor progress where it exists. Parent and teacher together can work out a plan for helping the child.

Some schools are substituting a report card that tells the parent how well his child is doing in each subject, in comparison to his ability. Then in a report, which is mailed home to the parent in the spring, the teacher informs the parent on his child's progress as compared to national norms. Standardized test scores are not reported, but parents are informed as to whether their child is "much above the norm"; "above the norm"; "at the norm"; "below the norm" for his grade.

This information is useful to parents in planning for their children. Some parents who might never plan college for their children are encouraged to think of higher educational goals when they discover they have a bright child. Parents whose aspirations are too high for their child can begin lowering their sights if it appears to be necessary. Sometimes remedial work can be planned cooperatively, where scores are low in the light of a pupil's ability.

This information can, of course, be conveyed in a conference and, in fact, might better be so transmitted. Written communications sent out all at once invite invidious parental comparisons and competition.

© (Cartoon by George W. Kesrer, from *Saturday Evening Post*)

*"According to this, you're a neat, punctual, healthy,
well-behaved, stupid kid."*

Traditional and Modern Schools

Those critics of modern education who speak nostalgically about the traditional schools of an earlier day have forgotten—if they ever knew—what those schools were like. The two photographs on the facing page illustrate some rather dramatic differences between old and new. The picture at the top depicts a classroom at the beginning of the twentieth century. Classes were well disciplined; children sat quietly in their seats, hands folded on the desk or arms crossed behind their backs, waiting until the teacher called on them to give an answer. In reading class, all pupils "read" from the same book at the same time; the teacher called first upon the brightest pupil who sat in the front seat in the first row. Slow learners stumbled through, prompted by the teacher on almost every word, while fast learners sat in bored but disciplined silence, afraid to relieve the monotony by peeking at the next page.

The formal discipline of the old school is missing in the bottom picture. Gone are the stiff postures and pin-drop silence of the earlier pupils. There are times when absolute silence is demanded in the modern classroom, but usually the noise level permitted is related to the activity on hand. Gone, too, are the bored hours of patient waiting when young, quick minds had to be quiescent for most of the day, trying to find their own mental stimulation, since it was completely lacking in the outside environment. In the modern school, discipline and learning are derived from the pupil's absorption in constructive work. There are, of course, genuine deficiencies in today's schools and we have tried throughout this text to point out the areas in which these deficiencies exist. But critics who would have us return to the kind of educational program represented in the picture at the top of the page are pursuing a course that is dangerous to our goals of education. © (Photos: Brown Brothers [top] and the *New York Times* [bottom])

2. Teachers sometimes use anecdotal records to justify some action on their part.

3. An anecdotal record can include only a small portion of the significant behavior incidents of a pupil. Anyone reading the anecdotal record may get a distorted picture of the total behavior pattern of the child.

4. Many teachers fear that anecdotal records may give the teacher to whose class the child goes the following year a prejudice against the child.

5. Preparing, summarizing, and interpreting anecdotal records is a time-consuming process. Unless the school staff includes a director of guidance or someone with comparable preparation, the writing of anecdotal records should not be undertaken on a large scale.

6. Undesirable behavior is observed more easily than desirable behavior. Teachers should observe and record evidences of normal growth and development even more diligently than evidences of retarded behavior.

SOCIOGRAMS. A sociogram is a chart of the interrelationships within a group. The purpose of a sociogram is to discover the relation of any one pupil to the class as a whole. Sociograms have been widely used in elementary schools for helping individual pupils improve their social relationships, for reshaping administrative practices, for grouping for committee work, and for grouping for play activities. Some teachers are more alert than others in detecting the status of individual pupils in the group, but all teachers need the help of some systematic device for supplementing personal observation.

Although the sociogram may be very useful in revealing interpersonal relationships among the pupils that the teacher did not detect through observation, it should not be regarded as the final answer. A sociogram may serve as an effective starting point for the study of social dynamics in the classroom, but it should be followed by a careful study of the group structure made from time to time. The teacher should not assume that one sociogram will reveal the class structure over a period of time or that the grouping for play will be the same as that for class work. The sociogram is a professional instrument to be used only by those who understand its uses and limitations. It will not be worth much unless it is supplemented by other techniques of evaluation and unless definite action is taken to make use of the information gained in helping individual pupils gain status in the group.

HOW TO CONSTRUCT A SOCIOGRAM. Sociograms may be used for a variety of purposes, such as selecting committees to work on a social-studies unit, dividing children into groups for play activities, and planning a school party or program. The first step is to ask the children, "With whom would you like to work on a committee?" Each child is asked to write his own name at the top of a 3″ × 5″ card and then to write the names of his first choice, second choice, and third choice. The choices may then be tabulated in the form shown on page 400.

The tabulation form shown on the following page provides a great deal of information about the twelve children and constitutes the basic data used in drawing the sociogram. The tabulation and the sociogram together show the isolates, such as Pat, Rose, and Walter; the stars such as Jane and John; and the mutual choices such as John and Robert, Jane and Karen, and David and Robert.

After the tabulation form has been completed, the teacher may construct the sociogram, using circles for boys and triangles for girls. If the class is large, it may be advisable to use a cardboard approximately 30″ × 30″ for the drawing. The general procedure is to locate the "stars" near the center and the "isolates" on the periphery to minimize the number of long lines and the number of intersecting lines.

The teacher can use the information revealed by the sociogram for the purpose of locating pupils who have not achieved status in the group and for helping them overcome handicaps that prevent them from gaining acceptance by their peers. More complete information concerning the construction and use of sociograms can be obtained from several sources.[9]

The physical status of pupils

Teachers are concerned with evaluating the physical status of pupils because it determines the amount of energy available for school work and other activities, it is related to the social and emotional adjustment of the pupil, and it accounts to a large extent for the pupil's success in every part of the school program. If every child could be examined by a physician every day of the school year, it would be unnecessary for teachers to be concerned with this type of evaluation. Since this is obviously impossible, teachers must accept the responsibility for the detection of physical disorders that interfere with normal growth and educational progress, as well as for fostering a positive approach to healthful living.

It does not require a great deal of preparation or special equipment for teachers to be able to detect the symptoms of common physical disorders and to call attention to the need for an examination by a physician. Teachers need to know how to check on general health; height and weight (considered in relation to race, nationality, and heredity); posture; symptoms of nervous disorders; cleanliness and suitability of clothing; and the condition of eyes, ears, nose, and throat, chest, arms, legs, and neck, face, lips, hair, and scalp, and teeth, back, and feet.

Procedures and instruments used for evaluating the physical status of

[9] See Horace Mann-Lincoln Institute of School Experimentation, *How to Construct A Sociogram* (Teachers College, Columbia University, 1950).

A SOCIOGRAM BASED ON THE DATA PRESENTED
IN THE TABULATION FORM

| Girls | △ |
| Boys | ◯ |

1	To first choice
2	To second choice
3	To third choice
	Mutual choice
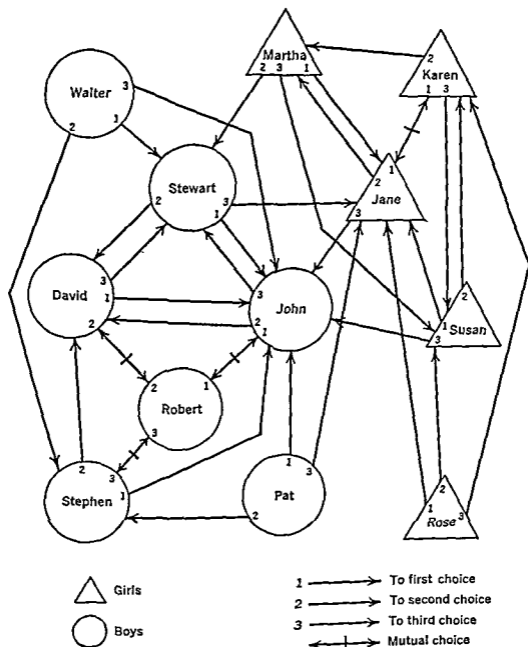
Chooser \ Chosen	David	Jane	John	Karen	Martha	Pat	Robert	Rose	Stephen	Stewart	Susan	Walter	
David			1				2			3			
Jane			3	1	2								
John	2						1			3			
Karen		1			2						3		
Martha		1								2	3		
Pat		3	1						2				
Robert	2		1						3				
Rose		1		3							2		
Stephen	2		1				3						
Stewart	2	3	1										
Susan		1	3	2									
Walter			3						2	1			
Chosen as:													
1st Choice	0	4	5	1	0	0	1	0	0	1	0	0	
2nd Choice	4	0	0	1	2	0	1	0	2	1	1	0	
3rd Choice	0	2	3	1	0	0	1	0	1	2	2	0	
Total	4	6	8	3	2	0	3	0	3	4	3	0	

[10] Adapted from Helen Hall Jennings, Sociometry in Group Relations, American Council on Education, 1948, p. 18.

A SOCIOGRAM BASED ON THE DATA PRESENTED IN THE TABULATION FORM

| Girls (triangle) | |
| Boys (circle) | |

1	→ To first choice
2	→ To second choice
3	→ To third choice
⟷	Mutual choice
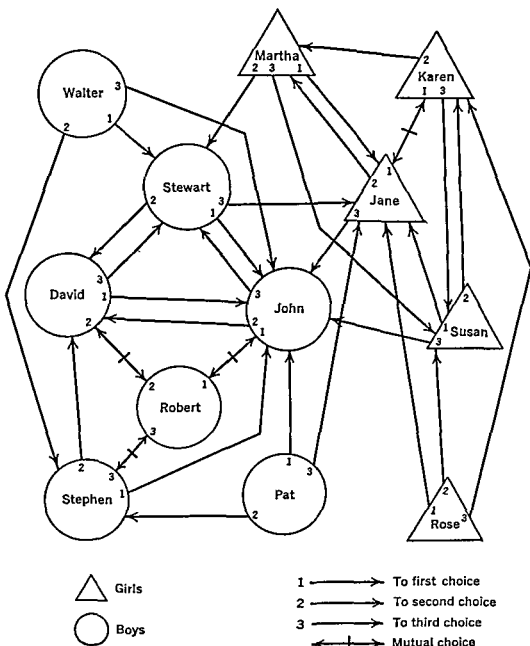
pupils include a complete physical examination by a physician, daily inspection by the teacher, adequate health records, the clinical thermometer, the audiometer, the whispered speech test, the watch-tick test, the Snellen Chart, the Eames Eye Test, and the Betts Telebinocular.

Evaluating growth in interests

Since learning is more rapid and more lasting and has more valuable concomitants when it is based on pupil interest, and since teachers have a responsibility for helping pupils develop more worth-while interests, it follows that teachers need to be concerned with procedures for evaluating the interests of pupils.

Children's interests in people, in books, in the natural environment, in games, and in various kinds of activities need to be evaluated. The dimensions of children's interests also need to be evaluated. These include range of preferences or variety of interests, range of participation or variety of activities, and intensity or depth of interest in any specific activity.

Procedures for evaluating growth in interests include analysis of books borrowed; questionnaires or inventories in which the child is asked to list the books he has read, the activities in which he has engaged, and his preferences among them; and teacher observation of the activities in which children engage, the games they like to play, and their favorite topics of conversation.

Evaluating growth in attitudes

The school cannot escape concern with the attitudes that children develop both in and out of school. The child's attitudes toward his playmates, his teacher, his parents, and toward social customs and institutions are all related to his mental health. Behavior does not result from the intellect alone; it results from the individual's background of attitude patterns and experiences. The child's attitudes affect what he learns, what he remembers, what he thinks, and what he does. Hence, evaluation of the child's attitudes —his feelings for and against things—assumes a fundamental role in guiding his development.

Formal instruments for evaluating attitudes are limited primarily to the high-school and adult levels. However, attitude scales and questionnaires can be adapted for use in the elementary school. These may be supplemented by evidence recorded informally by teachers from observation of pupil's actions, conversations, discussions, and written work.

Evaluating growth in work-study skills

The development of effective skills for learning is coming to be regarded as one of the most important functions of the elementary school. These skills, rather than the amount of information he has stored up for future use, will determine to a large extent the child's future success, both as a student and as a citizen. The development of these skills is especially important in the upper grades of the elementary school. Work-study skills include the ability to read maps, charts, graphs, and tables, to use the table of contents and index of a book, to locate books in the library by use of the card index, and to outline, organize, and tabulate data.

Some of these skills are included in achievement tests in reading. Others may be evaluated by means of such tests as the Iowa Every-Pupil Test of Basic Study Skills and the Pirtle Library Test 6B. Informal methods of evaluating growth in work-study skills include observation of pupils in committee work, problem-solving, and group discussions, observing samples of written work of pupils, and checking on pupils' skill in the use of the library.

Evaluating growth in creative self-expression

Elementary-school teachers and principals are becoming increasingly aware of the responsibility for fostering creative self-expression in pupils. They realize that adjusting effectively to our complex society and contributing to social progress require individuals who are creative in their approach to people, situations, problems, and materials. The development of creative abilities represents one of the most important contributions of the school to the building of a better social order and to fostering the mental health of children.

The development of creative abilities is an objective of many, if not all, parts of the curriculum. It may consist of the ability to express original ideas through art or music; to plan and perform unique experiments in science; or to plan and carry out an enterprise in group living. Evaluation of growth in creative self-expression is, therefore, an aspect of evaluation in all areas of the curriculum. Since creative ability is seen in terms of the child's own standards, it is particularly difficult to evaluate by means of formal instruments and procedures. Teachers need to develop criteria for evaluating creative efforts, such as the originality of ideas used in written work or art; variety of ideas expressed; and richness, ease, and finish of expression. Evaluation of growth in creative expression consists largely of preserving pupil products in language, art, and science, and of observation of pupil behavior.

Evaluating growth in critical thinking

Almost every teacher realizes that one of his responsibilities is to help children learn how to think for themselves in solving real problems. Some teachers, however, confuse critical thinking with the ability to give the answers expected. Critical thinking involves the ability to collect and interpret data; to refrain from drawing conclusions which go beyond the data collected; to apply principles and generalizations to new situations; and to evaluate the arguments, ideas, and conclusions of others.

If instructional practices are to foster the abilities involved in critical thinking, methods of evaluating these abilities must be found. Several tests relating to the development of critical thinking are available at the upper elementary-school level. One of the best is a Test of Critical Thinking in School Studies, published by Teachers College, Columbia University. It measures the ability to obtain facts from graphs, maps, references, newspapers, and magazines; the ability to draw reasonable conclusions from facts collected; and the ability to apply generalizations to new situations.

Evaluating the home and community
background of children

Intelligent guidance of the child in school involves an understanding of the total learning environment to which he has been exposed. It is not only true that the whole child comes to school; it is also true that he brings his home and community background with him.

Information concerning the home background of the pupil, which the school should assemble and use, includes the attitude of the parents toward the school, parent-to-parent relationships, parent-to-child relationships, child-to-child relationships, and socioeconomic status. Information concerning parents should include amount of schooling, occupation, health, birthplace, citizenship, and language spoken. Information concerning the community should include economic conditions, customs and traditions, facilities for recreation, and community resources that can be used for instructional purposes.

Methods of obtaining information concerning home and community background include interviews, questionnaires for parents to fill out (if children are very young), questionnaires for pupils to fill out, and community surveys.

Cumulative Records

The name "cumulative record" is applied to the form used in the modern elementary school for gathering and maintaining for constructive use those

facts about each child from which a well-rounded impression can be gained concerning his growth and development toward all the objectives for which the school accepts responsibility. Such records are indispensable in a school that recognizes individual differences in abilities, interests, and backgrounds of pupils; regards education as a process of continuous growth; accepts the responsibility for providing individual guidance rather than merely instructions on the "class-as-a-whole" basis; and attempts to use evaluation procedures in harmony with the broader objectives of the elementary school.

The staff of the Wooldridge School (now Casis School), Austin, Tex., in cooperation with the University of Texas, has published a bulletin that describes the type of cumulative record maintained for each pupil and the relationship between these records and the procedures employed in grouping, marking, and reporting to parents.[11] The record maintained for each child consists of (1) one manila folder of lettter size, (2) two double-faced printed cumulative record cards ($8\frac{1}{2}'' \times 11''$), (3) mimeographed anecdotal record for data-accumulation purposes, (4) health information blank, (5) check list filled out by parents, (6) record of initial interviews with parents, (7) copies of standardized tests given the individual child, (8) emergency-care form, (9) samples of pupil products gathered at different times, and (10) other significant data, such as copies of correspondence regarding the child, reports, and notes.

During the school year the folders are maintained by the homeroom teacher in a metal file cabinet equipped with a lock; during the summer they are stored in the principal's office. Aside from the classroom teacher, only professionally trained personnel may be authorized to see and use the records, *and these only with special permission of the principal.*

Ideally, the cumulative record will provide:
   a. Facts and impression which staff members consider to be most significant in revealing and shaping the development of pupils.
   b. Evidences of trends of growth and development and potential strengths and weaknesses of pupils.
   c. Information on each area of a pupil's experience and development over a period of years.
   d. Information so clearly stated that a teacher, principal, or counselor can readily read and understand the record without difficulty.
   e. An aid to all staff members in their daily work with pupils.
   f. Opportunity for constant revision and improvement of the form and content of the record through the cooperation, study, and experimentation of all staff members.
   g. No more clerical work than can be justified by its practical use.[12]

[11] Wooldridge School Staff, *Grouping, Marking and Reporting to Parents* (Bulletin No. 5003, University of Texas, 1950).
[12] Ibid.

Provision is made on the cumulative record cards for recording information under the following headings: (1) identifying data (date and place of birth, sex, religion, address, telephone, and schools previously attended), (2) school history, (3) testing record, (4) medical record, (5) social and personal history, (6) developmental factors (chronological, mental, and educational ages, etc.), (7) cumulative graphical presentation of developmental data, (8) special abilities and interests, (9) citizenship traits, (10) significant accomplishments, and (11) significant personality traits.

The instructions for keeping the cumulative record contain suggestions for collecting the various types of data and state the time of year (usually the second week in November and the second week in May) for recording and checking data.

Improving Reporting Practices

The improvement of practices in reporting to parents on the progress of the child in school is an integral part of curriculum improvement. These practices influence the child's personal-social adjustment, serve as goals toward which pupils work, and indicate to parents what the school considers to be important in the growth and development of children. Accurate and diagnostic reports of pupil progress provide a basis for mutual understanding, good will, and cooperation between parents and teachers in their efforts to improve the total learning environment of the child. The realization that the report to parents may either build good will or destroy it—may either enlist or alienate the cooperation of parents and children—accounts, no doubt, for the increasing amount of attention that is being given by principals, teachers, and parents to the problem of improving reporting practices.

Should S and U grades be used instead of A, B, C, D, E, and F? Should written reports be abolished in favor of parent-teacher conferences? Should there be a different type of reporting system used for the various levels of the school program, such as the primary, intermediate, and upper grades? These questions can be answered satisfactorily only after a thorough study has been made by the principal, teachers, and parents of an individual school. There is no best system of reporting to parents; rather, that system is best that has been developed cooperatively by those concerned, that incorporates the finding of research relating to child growth and development, and that is clearly understood by teachers, pupils, and parents.

The following suggestions may be helpful to groups interested in improving reporting practices:

1. The purpose of reporting to parents is to enlist their cooperation in providing the best educational opportunities possible for the child.

2. The reporting procedure should include an appraisal of the physical, mental, emotional, and social growth of the child.

3. The reporting procedure should emphasize the child's progress in terms of his own abilities and past achievements rather than his standing in comparison with other members of the class.

4. The reporting procedure should emphasize guiding the child rather than judging him.

5. The reporting procedure should reflect a comprehensive picture of the achievement of the child without requiring too much clerical work on the part of the teacher.

6. Report cards should be supplemented by letters to parents, samples of the child's work, parent-teacher conferences, and home visits.

7. The reporting procedure should be consistent with the philosophy of the school.

Summary

1. Evaluation of pupil progress is an integral part of the problem of improving the elementary-school curriculum.

2. The task of evaluation is not to select and eliminate but to determine the kind of educational experiences that will meet the needs of the child.

3. Evaluation consists of the accumulation of comprehensive evidence concerning the abilities, status, and problems of children by means of formal as well as informal procedures, and organizing and interpreting this evidence into a comprehensive description of the child against the background of his educational experience.

4. An adequate program of evaluation of pupil progress must (a) be closely related to the objectives accepted in the school, (b) be comprehensive, (c) be continuous, (d) be cooperative, and (e) make use of results for continuous improvement of the curriculum.

5. Major factors of pupil growth that need to be evaluated include (a) mental ability or academic aptitude, (b) achievement in the various curriculum areas, (c) personal-social adjustment, (d) physical status, (e) growth in interests, (f) growth in attitudes, (g) work-study skills, (h) growth in creative self-expression, (i) growth in critical thinking, and (j) home and community backgrounds.

6. A cumulative record is the form used in the modern elementary school for gathering and maintaining for constructive use those facts about each child from which a well-rounded impression can be gained concerning his growth and development toward the objectives for which the school accepts responsibility.

7. Accurate and diagnostic reports to parents on the progress of the child in school provide a basis for mutual understanding, good will, and cooperation between parents and teachers in their efforts to improve the total learning environment of the child.

8. That system of reporting to parents that is best for a particular elementary school is the one that has been developed cooperatively by the teachers, pupils, and parents in terms of local needs and problems.

SOME PROBLEMS AND PROJECTS

1. Anecdotal records can be used to good advantage by a teacher in evaluating pupil progress, provided they concentrate on describing child behavior rather than merely labeling it. Here are some examples of different approaches to the writing of anecdotes:

Marie is a very stubborn child. Today she slapped Rose, apparently without cause, and refused to apologize for her action. I think she has been spoiled at home—has been given her own way too much.

Today Marie had another one of her sulking spells. When I scolded her for it, she pouted for the rest of the day.

Today, when sides were chosen for a game, Marie was the last one to be chosen. This happens so often that I am beginning to wonder whether Marie has any friends in the group. When the game finally got started, she hit and slugged her way to the goal. May rejection by the group be part of her difficulty?

Today I chose Marie to work with Sandra in getting the room ready for company. She beamed from ear to ear. When the job was finished and I complimented her, she was delighted—in high spirits and good work mood all afternoon.

In the first two anecdotes the teacher is labeling behavior: Marie pouts and sulks and is stubborn. However, the teacher fails to describe the situation so that we can see what led up to Marie's pouting, sulking, and stubborn behavior. From the last two anecdotes we are able to set up some hypotheses regarding the immediate cause of Marie's negative behavior and also her positive behavior. When the teacher has enough such anecdotes she may be

able to arrive at some tentative conclusions as to why Marie behaves as she does; she may also be able to plan more constructively for Marie.

In writing such anecdotal records, what kinds of behavior might a teacher note on the playground? before school? during a work period? during art? What other information should she have about a pupil in order to arrive at tentative conclusions? Read Chapter Six, "Obtaining Information," in D. A. Prescott, The Child in the Educative Process (McGraw-Hill, 1957), for a helpful account of anecdotal records.

2. In your first-grade classroom, you have a number of pupils who are not ready to start "book reading" by Christmas. Three of the mothers came to you concerned about their children's lack of progress. What kinds of records of their reading progress might be helpful to use in conferences with these parents?

3. In Maryville School, the teachers report to parents by the conference method, supplemented by a written letter, which goes home three times a year. The following is a letter written by the first-grade teacher:

DEAR MRS. WYLIE:

Beverly's progress so far in the first grade has not been very satisfactory. Her behavior seems very immature and I do not think she is capable of holding her own with the other first-grade children. She does not seem very interested in her work and has difficulty in following directions. Does she get enough sleep at night? Perhaps a physical check-up would be advisable.

I shall be happy to discuss Beverly's progress in more detail with you at your convenience.

Sincerely,
MARTHA WHITE

Miss White's letter is a sample of the kind of letter that should not be written to a parent. Can you tell why? Does the letter really help the parent understand why Beverly is not progressing? Does it give any evidence of Beverly's lack of progress or is it merely the teacher's subjective judgment?

Compose a letter to Mrs. Wylie, inventing the facts you need to know about Beverly in order to write the letter. Try to make your letter a more constructive one than Miss White's, indicating what action you think should be taken to help Beverly.

4. Individual folders into which pupils periodically deposit dated samples of their work are part of evaluation procedures in many classrooms. What are some of the ways in which teachers might make use of such folders?

5. Whether the grade of a pupil as reported to parents on a report card

is to be determined in the light of the pupil's ability or in comparison with a grade norm is a problem that has long plagued the elementary school. Specifically, the problem may be stated as follows: How to grade Susie who, with an IQ of 90, is reading up to the level of her ability, but is still below the third-grade norm and is in the slow-reading group? Should she be given an S for satisfactory work, or a U to denote unsatisfactory? Or, if grading is on a four-point scale, should she receive a C, which denotes average or passing work for the grade, or D which is unsatisfactory, not passing? What are the advantages and disadvantages of each system?

Conduct a survey of the parents of your pupils. Which system do they favor?

Suggest alternate ways of reporting to parents that will accomplish the goal of providing parents with a realistic appraisal of his child's progress, recognizing at the same time that we cannot expect the same level of achievement of all pupils.

The bulletin, Methods of Reporting Elementary School Children's Progress to Parents, by H. J. Otto (University of Texas, 1957), is an excellent source of help on this problem.

6. Ten-year-old Ann is disturbed over her report card. The teacher has marked her C— in reading. "I don't know why I got C— and I don't know what to do to improve. Every year before this I got A in reading."

Suggest some reasons for the discrepancy between Ann's previous grades in reading and this one. Might the fault lie in the variation between teachers' grades rather than in deterioration on Ann's part? How might a poor teacher-pupil relationship contribute?

If you taught in a school system in which letter or number grades were given to pupils, what could you do to help a pupil like Ann? Would individual conferences prior to reports be in order?

7. If possible, collect a set of compositions written by an elementary-school class. Have each member of your college class or several of your fellow teachers grade these papers, using grades A, B, C, D, and F. Then compare grades, to see the extent of agreement. How can you explain the disagreements?

8. Seven-year-old Sandra's IQ, as measured by the Stanford-Binet Test of Intelligence was 107. Her test performance revealed a tremendous range— from the fifth year, where she passed all items, to the twelfth year, where she failed all items. The examiner reported that the outstanding characteristic of Sandra's test performance was that she could not face failure; when she

came to a difficult item she did not really try, but bluffed or tried to change the subject or gave a silly answer to hide her embarrassment.

Of what use to the teacher is the examiner's report of Sandra's test behavior? Can an IQ be properly interpreted without such a report?

Is Sandra's IQ of 107 likely to be the best indication of her intellectual capacity? Is it more likely an indication of her intellectual functioning? What is the difference between these two concepts?

9. Recent research in the field of intelligence testing has raised some questions concerning the validity of present-day intelligence tests. In the pamphlet Social-Class Influences upon Learning, Davis presents evidence to show that these tests discriminate against lower-class children in that they include items that are part of the culture of the higher socioeconomic groups but not of the lower. It is not likely that the term "sonata," for example, will be familiar to boys and girls from a low socioeconomic group.

Suppose that in your third-grade classroom you have four lower-class children whose intelligence quotients as revealed by a group test were 87, 92, 89, and 85 respectively. Would you conclude that these children were subnormal and plan their educational program according? In the light of the research quoted above, how will you make use of the test results?

SELECTED READINGS

Books

GERBERICH, J. RAYMOND, *Specimen Objective Test Items* (Longmans, Green, & Co., 1956). Provides suggestions for constructing and using objective achievement tests to measure a great variety of outcomes.

GREENE, HARRY A., et al., *Measurement and Evaluation in the Elementary School* (Longmans, Green, & Co., 1953). A comprehensive treatment of measurement and evaluation.

NATIONAL SOCIETY FOR THE STUDY OF EDUCATION, *The Measurement of Understanding* (University of Chicago Press, 1946). Presents illustrative test items for measuring understanding in various curriculum areas.

———, *Basic Concepts in Music Education* (University of Chicago Press, 1958). Chapter 18 presents a comprehensive view of the role of evaluation in the educational program and makes suggestions for evaluating aptitude for and achievement in music.

REMMERS, H. H., and GAGE, N. L., *Educational Measurement and Evaluation* (Harper & Brothers, 1955). Holds that evaluation should be used to find out what learning experiences children can use rather than for selection and elimination.

TORGERSON, THEODORE L., and ADAMS, GEORGIA S., *Measurement and Evaluation for the Elementary-School Teacher* (Henry Holt and Co., 1954).

Analyzes the evaluative process and presents suggestions for the use of various instruments and procedures.

TRAVERS, ROBERT M. W., *How to Make Achievement Tests* (The Odyssey Press, 1956). Presents suggestions for constructing, scoring, and administering various types of achievement tests.

TRAXLER, ARTHUR E., *Techniques of Guidance* (rev. ed., Harper & Brothers, 1957). Presents suggestions for the evaluation of aptitudes, achievement, personal qualities, and interests. Reviews research and makes suggestions for the use of objective tests, anecdotal records, sociometric devices, cumulative records, and reports to homes.

WRIGHTSTONE, J. WAYNE, *Evaluation in Modern Education* (American Book Co., 1956). Describes a great variety of evaluation techniques that may be used in day-to-day instruction.

Pamphlets and journals

AMERICAN ASSOCIATION OF SCHOOL ADMINISTRATORS, *Appraisal and Promotion Practices in Urban School Districts, 1955–1956* (The National Education Association, 1956). A 56-page pamphlet describing appraisal and promotion practices in a large number of schools.

AMERICAN ASSOCIATION FOR HEALTH, PHYSICAL EDUCATION, AND RECREATION, *Measurement and Evaluation Materials Applied to Health, Physical Education and Recreation* (The National Education Association, 1950). A 138-page pamphlet describing evaluation materials and procedures.

AMERICAN EDUCATIONAL RESEARCH ASSOCIATION, *Technical Recommendations for Achievement Tests* (The National Education Association, 1955). A 36-page pamphlet suggesting policies for achievement testing.

CHILDHOOD EDUCATION, "We Evaluate Continuously," *Journal of the Association for Childhood Education International*, May 1958 (The Association, Washington, D. C.). Contains articles on evaluation by Howard Lane, Winifred Bain, and others.

DEPARTMENT OF CLASSROOM TEACHERS, *Evaluating and Reporting Pupil Progress* (The National Education Association, 1955). A 33-page pamphlet suggesting principles and procedures for evaluating and reporting pupil progress.

NATIONAL COUNCIL FOR THE SOCIAL STUDIES, *Selected Items for the Testing of Study Skills and Critical Thinking* (The National Education Association, 1957). Provides suggestions for evaluating these two important phases of pupil progress.

STRANG, RUTH, *How to Report Pupil Progress* (Science Research Associates, 1955). Evaluates several forms of reporting to parents on pupil progress.

——, *Reporting to Parents* (rev. ed., Teachers College, Columbia University, 1952). Presents guiding principles for an adequate program of reporting to parents.

WOOLDRIDGE SCHOOL STAFF, *Grouping, Marking and Reporting to Parents* (The University of Texas, 1950). Reports on a three-year study of pupil personnel practices in an elementary school. Contains an excellent description of a cumulative record.

SELECTED FILMS

The following represent only a few of the films that are available on measurement and evaluation. The teacher contact the film service at the state university or state department of education for other suggestions.

Counseling—Its Tools and Techniques. A 22-minute sound film illustrating the use of interviews, records, tests, referrals, anecdotal records, cumulative records, and questionnaires. Mahnke.

Discovering Individual Differences (Part II of *Elementary School Children*). A 25-minute sound film demonstrating how a fifth-grade teacher used evaluation techniques to gain an understanding of each child and how she adapted her teaching program to meet their individual needs. McGraw-Hill.

Each Child Is Different (Part I of *Elementary School Children*). A 17-minute sound film demonstrating the complex and different backgrounds, abilities, and needs of fifth-grade children. McGraw-Hill.

Guidance Problems for School and Home. An 18-minute sound film that presents a case study of Danny, a child in the second grade, who is socially maladjusted and lacks interest in his school work. Shows how close cooperation between home and school helps solve such problems. Hartley Prroductions.

Report on Donald. A 19-minute sound film showing how speech defects and a lack of understanding of these defects can lead to social maladjustment. Suggests remedial measures that can help to minimize or correct speech defects. Columbia University.

☐ THE PROBLEM of evaluating the effectiveness of the elementary-school program has been receiving an increasing amount of attention in recent years. Pupils, parents, and other citizens are continually passing judgment on the school program, and the results of piecemeal, unsystematic, and superficial appraisals are all too apparent in unwarranted criticisms, inadequate financial support of the schools, frequent changes in school personnel, and refusal on the part of the public and the school administration to accept changes in outmoded school programs. Teachers and principals, therefore, have no responsibilities more important than that of developing systematic and valid procedures for locating the strengths and weaknesses of the school program and of enlisting the cooperation of all who are concerned with the work of the schools in making improvements.

Benefits of an Evaluation Program

The values of a cooperative evaluation of the school program will necessarily vary from school to school. They will be determined to a large extent by the points of view that parents and teacher bring to the undertaking and by those that are developed as the program is carried forward. Nevertheless, those who have participated in cooperative

Evaluating the Program of the Elementary School

Evaluation refers to the process of determining the extent to which the elementary school is attaining the goals formulated and accepted by the faculty and parents.—HAROLD G. SHANE and E. T. McSWAIN

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studies of the school program generally agree that the following values have grown out of the program:

Children have a more direct contact with community life

Wherever teachers, pupils, parents, and other interested citizens participate in a cooperative study of the school program, they begin to realize that the school alone cannot meet the educational needs of all the children in the community. Therefore, one result of the evaluation program has been to provide children with a more direct acquaintance with community life, and to increase the active participation of the citizens of the community in the instructional program. For example, one committee composed of parents and teachers made a study of the places in the community to which classes could be taken on excursions. The committee listed the addresses and telephone numbers of these places, the type of objects or processes that could be observed, the part of the curriculum to which the excursion could be most closely related, the number of children who could be accommodated, and the time of day most suitable for the visit. Another activity consisted of making plans for extending the art program of the schools into the community by *exhibiting pupils' art work in store windows and by decorating* the windows of business establishments at Halloween. Plans were also made for relating the art work of the community to the school art program by having children visit art galleries and the studios of local artists and by displaying in the school arts and crafts work of local citizens.

Through such cooperative planning, which has grown out of the evaluation program, children have also been given a more direct contact with other aspects of community life, such as health, safety, citizenship, local history, and community recreation.

School-community relationships are improved

As they participate in the evaluation program, citizens come to realize more fully what the school is trying to do for children and become more interested in trying to secure the facilities needed for a good school program. During the progress of an evaluation program in one school system, the local businessmen reported that more of their customers wanted to talk about school problems than ever before, and teachers reported *that more parents* visited the classrooms and wanted to help with the school program.

The program promotes the professional growth of teachers

By working with pupils, parents, and other staff members on an evaluation program, teachers gain a better insight into the purposes of the school, a better understanding of the community, a clearer recognition of the developmental needs of children, and a deeper sense of loyalty to the school program. Staff morale is improved by this opportunity for teachers to learn to work together as a team and to share with one another the procedures they have found successful. An evaluation program in one school system brought to light the need for more cooperative planning on the part of the staff of the elementary schools and caused promising practices, such as unit teaching and cooperative group study of child development, to become more general throughout the school system.

Evaluation is a means of meeting hostile attacks

There is an obvious difference between the normal, sincere, and justified protests against unsatisfactory conditions that may exist in a school or a school system and the unfair, unjustified, and unreasonable attacks that are apparently aimed at little less than the utter destruction of the American system of free public education. These attacks come, for the most part, from individuals who know very little about the practices in modern schools. They have, however, a fluency of style and an ability to distort facts that leads many citizens to believe that no attention is given to discipline in the modern school, that children have no opportunity to learn the fundamental skills, and that moral and spiritual values are being neglected.

Whether or not such attacks result in the disruption of a good school program depends to a great extent upon how intelligently the leadership in the school has gone about the job of broadening the base of judgments on which school policies rest and upon how well the citizens of the community are organized for the purpose of learning the facts about the schools. The school administrator cannot be content with merely *informing* the public about the school program for the purpose of gaining financial support; he must think in terms of providing an opportunity for widespread participation by citizens in the process of planning and evaluating the school program. The strategy of democratic collaboration is not only the best method of preventing hostile attacks, but it also provides the best machinery for meeting attacks when they occur.

School officials are beginning to realize that the best defense is a good offense, that the school draws its strength from the community it serves, and

that provision must be made for involving as many citizens as possible in the program of school evaluation and improvement. Citizens committees have been organized in many communities throughout the nation to make on-the-spot examinations of school programs and to create a climate of informed opinion in which educational leadership can work effectively.[1]

The National Citizens Commission for the Public Schools was organized in 1949 with two avowed purposes: "(1) to help Americans realize how important our schools are to our expanding democracy and (2) to arouse in each community the intelligence and will to improve our public schools,"[2] The Commission has published a booklet that explains how a citizens committee may be organized and lists a number of questions that citizens should ask about the purposes and program of the elementary school. The work of this commission will help to coordinate the efforts of local committees and to provide an orderly procedure for the appraisal of hostile attacks on the schools.

The Democratic Approach

The authoritarian pattern of education that existed in many elementary schools in the past provided little opportunity for principals and teachers to participate in formulating goals, developing programs, and evaluating progress. The appraisal function was reserved for the higher administrative officials of the school organization. Their major function was to pass judgment on individual teachers in terms of the results of achievement tests administered to pupils—to "rate" teachers on score cards or other devices—rather than to find the strengths and weaknesses of the entire program and to plan cooperative methods of making improvements. This system of evaluation bears a striking resemblance to the educational practices in authoritarian countries, in which government officials determine the objectives of the schools, the activities to be carried on, and the evaluation of achievements in conformity with a common standard arrived at by the small group that decides what constitutes good school practice.

When the democratic approach is used, everyone concerned with the school participates; this includes administrators, supervisors, teachers, pupils, parents, and other interested citizens. In accordance with the recognized

[1] See Rhea T. Workman and Mrs. DeWitt Brunson, "Orangeburg's Pattern for Democratic Planning," *School Executive*, April 1951, pp. 57–59. Also, Kenneth E. Oberholtzer, Superintendent of Schools, and the Denver Board of Education, "Denver Looks at Its Schools" (Denver Public Schools, Denver, Colo., 1950).

[2] National Citizens Commission for the Public Schools, *How Can We Help Get Better Schools?* (The Commission, 1951).

American principle that the people, when given adequate information, can be depended upon to make the right decisions, the modern approach to evaluation places the major responsibility in the hands of the local school staff and parents. Consultants are brought in to assist the local staff in setting up an effective organization, gathering data, and formulating plans for improvement but not for the purpose of passing judgment on school policies and practices.

The democratic approach to evaluation is as much concerned with the insights developed and the growth achieved by teachers, pupils, and parents through the evaluation process as it is with measuring situations. Standardized tests have a place in the evaluation of the school program, but the use that is to be made of test results is the responsibility of the local staff. Comprehensive evaluation involves a great deal more than evaluating the achievements of individual pupils and teachers; it involves a systematic effort to determine the extent to which the school staff is operating as a cooperative unit in formulating goals, planning learning experiences, and evaluating achievements. The cardinal strength of a democracy lies in the fact that it broadens the basis of judgments upon which policies rest. Pupils, teachers, and parents are influenced to a greater extent by goals they have helped to formulate than by goals formulated by the head of the school and handed out with the label "our goals." When pupils, teachers, and parents join the principal in speaking of "our" goals, "our" policies, and "our" school, there is evidence that the democratic process has been used in the administration of the school.

Basic Principles

Although the details of organization and procedure used in evaluating the program of the elementary school will vary from school to school, there are certain basic principles that deserve serious consideration as the local staff approaches the problem:

1. The evaluation of the elementary-school program should be based upon objective evidence and systematic study rather than upon untested assumptions and unsupported opinions.

2. Each elementary school should be evaluated in terms of the objectives formulated and accepted by the faculty and parents, the needs of the specific group of children served by it, and the conditions and needs of the community. Even in the same school system it is advisable to evaluate each individual school in the light of its peculiar problems and those of the community it serves.

3. The factors evaluated should be sufficient in number and variety to give valid evidence of the extent to which the school program is attaining the goals formulated and accepted by the faculty and parents.

4. The evaluation process should involve the participation, in one way or another, of all individuals who are concerned with the work of the school.

5. Evaluation should be regarded not as an elaborate procedure reserved for experts but as a common-sense way of working together that is appropriate for parents, teachers, and principals.

6. Evaluation is a continuing responsibility. It should be a continuous process of evaluating progress from one year to the next rather than a sporadic effort to determine the status of the program at any given date. A good elementary-school program is a growing one, and it is not nearly so important to know where the school program stands as it is to know in what direction it is moving.

7. Evaluation is not an end in itself; it is worth while only when it results in some type of action to improve the school program.

Development of Evaluation Procedures

In 1937, the Department of Elementary School Principals of the National Education Association stimulated interest in the development of evaluation procedures for elementary schools by the publication of a yearbook devoted exclusively to the problem.[3] The yearbook committee held the view that diagnostic appraisal is essential for the purpose of finding the strong and weak points of the school program and that the evaluation should be cooperatively carried out by parents, pupils, teachers, the administrative and supervisory staff, and research specialists. It stated that satisfactory appraisal must take account of the school organization, the administrative and supervisory procedures, the curriculum, the methods of teaching, the extra-curricular activities, the efficiency of the school staff, and the quality and suitability of school equipment. The committee also took the position that evaluation should be a continuous process, but that findings relating to strong and weak points should be summarized at least once a year and used as a basis for improving the program. The committee, in addition, presented an analysis of the essential characteristics of an excellent elementary school.

During the last few years, literally scores of procedures have been developed for the purpose of evaluating the program of the elementary school. It is our purpose here to describe briefly a few of the instruments and proce-

[3] Department of Elementary School Principals, *Appraising the Elementary-School Program* (National Education Association, 1937).

dures that should contain valuable suggestions for the local staff in the development of procedures to fit local conditions.

Is Yours an Excellent School?[4]

Teachers, supervisors, and administrators from thirteen states participated in a workshop at George Peabody College which developed an instrument for evaluating the elementary school. The instrument provides criteria for evaluating the statement of purposes, the school program in each of the major areas of learning, the school personnel, the school plant, the measurement of pupil progress, the guidance program, the instructional materials, and the extent to which democratic processes are utilized.

What People Think about Their Schools[5]

Harold C. Hand has developed a series of questionnaires for the purpose of finding out what teachers, pupils, and parents think about their schools. He insists that there is no longer any necessity for any school administrator to make guesses concerning the degree of satisfaction or dissatisfaction with school practices that exists among these groups. Parents are given the opportunity to state how they feel about the way their children are treated by teachers and by other children, and about discipline, homework, methods of instruction, school activities, and many other parts of the school program. Teachers are given an opportunity to state how they feel about salaries and promotions, teaching load, administrative and supervisory practices, the community, and many other factors influencing teacher morale. Pupils are given the opportunity to state how they feel about the discipline in the school, the help received from teachers, the homework, the help with social problems, the student activities, the money required to participate in activities, the school lunches, the equipment, and the many other aspects of the school program.

Evaluation Handbook for Elementary Schools[6]

The handbook prepared by the Evaluation Committee of the Saint Louis Public Schools is one of the most comprehensive instruments for

[4] Division of Surveys and Field Services, *Is Yours an Excellent School?* (George Peabody College for Teachers, 1948).
[5] Harold C. Hand, *What People Think about Their Schools* (World Book Co., 1948).
[6] Saint Louis Public Schools, *Evaluation Handbook for Elementary Schools* (2nd experimental ed., Saint Louis, Mo., 1950).

evaluating the total program of an elementary school. Although it was developed specifically for use in the Saint Louis Schools, it contains many valuable suggestions that can be utilized by any elementary-school staff in the development of procedures to fit local circumstances.

The Committee prepared a mimeographed edition of the handbook consisting of four major sections: philosophy, school program, buildings and equipment, and staff. Each teacher, principal, and consultant in the school system was provided with a copy and requested to make suggestions and offer criticisms. Using the instrument, five elementary schools embarked upon a trial self-evaluation. As a result of this systematic, careful, and genuinely democratic procedure, the second edition of the handbook was developed and distributed in printed form in 1950.

Evaluating the Elementary School[7]

The Southern Association of Colleges and Secondary Schools launched a Cooperative Study in Elementary Education in 1948. Those in charge of the study realized that a careful evaluation of the total school program was needed in order to determine what steps should be taken to improve the quality of living and learning in the elementary schools of the southern region. During June and July, 1949, a South-wide committee prepared the *Elementary Evaluative Criteria* to serve as a guide to local school groups in evaluating their school program. The guide was used in selected schools in each of the southern states during the school year of 1949–1950, and each of these groups made suggestions for its improvement. The instrument was subsequently used in approximately 2,000 elementary schools as a guide to evaluation and improvement of the program. The experimentation with the original instrument provided the basis for the development of the publication in 1951 of *Evaluating the Elementary School*.

In addition to an introductory section and an extensive bibliography, the handbook contains sections on the following aspect of the school program: viewpoint, functions, program, resources, and planning. The introductory section explains why the school program should be evaluated, suggests methods of evaluation, and lists the expected results of an evaluation program. The section on viewpoint lists the guiding values to be sought in the elementary school, illustrates value-centered situations in elementary school, and provides examples of good learning situations.

The section on functions provides suggestions for clarifying the functions

[7] Southern Association of Colleges and Secondary Schools, *Evaluating the Elementary School* (The Association, 1951).

aspects of the program in greatest need of improvement, a list of appropriate readings, and space for listing suggestions for improving the manual.

During the 1957–1958 school year the Commission sponsored a group research project to analyze the suggestions for improving the manual that had been made by elementary-school personnel who had used it and by specialists in elementary education who had agreed to serve as consultants. The committee of twenty-four leaders in elementary education met again in May, 1958, discussed the manual item by item, and made decisions concerning its revision in the light of suggestions that had been made by the personnel of hundreds of elementary schools where it had been used. The manual that the Commission provided for the elementary schools of the state during the 1958–1959 school year was, therefore, based on the best judgments of a large segment of the professional personnel actively engaged in elementary-education work throughout the state.

Initiating the Evaluation Program

It has been suggested that evaluation should be a continuous process and that the faculty and parents in the local school should assume the major responsibility for it. This does not, however, relieve the administration of the responsibility for initiating the program. The approval of the board of education must be secured, financial arrangements must be made, an effective organization must be developed, consultants must be selected, and teachers and parents must be supplied with materials to study before the evaluation is begun.

The first step in the evaluation process is the organization of study groups for the purpose of defining the kind of school desired by pupils, parents, and teachers. This step is known as the development of evaluative criteria. The various chapters in this book were written for the purpose of helping prospective teachers and principals, as well as those already at work in elementary schools, to determine the essential characteristics of a good elementary-school program. Evaluative criteria for various phases of the program may be developed in terms of the material found in the following chapters:

1. How should the objectives of our program be developed and stated? (Chapter 4.)

2. How should learning experiences be organized? (Chapter 5.)

3. What methods of teaching seem most suitable for the achievement of chosen objectives? (Chapter 6.)

4. How can the staff be organized for effective participation in curriculum improvement? (Chapter 7.)

5. What are the essential characteristics of a modern language-arts program? (Chapter 8.)

6. What are the essential characteristics of a modern social-studies program? (Chapter 9.)

7. What are the essential characteristics of a modern arithmetic program? (Chapter 10.)

8. What are the essential characteristics of a modern science program? (Chapter 11.)

9. What are the essential characteristics of a modern program in health and physical education? (Chapter 12.)

10. What are the essential characteristics of a modern program in the arts and crafts? (Chapter 13.)

11. What are the essential characteristics of a modern program of evaluating and reporting pupil progress? (Chapter 14.)

It can be seen that the development of a description of the kind of school program desired by pupils, teachers, and parents will require considerable study, discussion, and consultation with individuals well qualified in the various phases of the program. As groups work on any one part of the program, they will see that it has relationships to other parts and that overemphasis on one part may impede progress in another. They will see that each problem must be considered in its relationship to the total school program.

The second step in the evaluation process is the selection or development of instruments and procedures for evaluating the program in use. The instruments and procedures needed will depend upon the number of areas of the program that the staff decides to evaluate and the number of individuals who will participate in the evaluation. For example, if the school staff, in cooperation with parents and consultants, decides to find out whether and to what extent teachers, pupils, and parents are satisfied with the present program and what aspects of the program they would like to see changed, they may decide to use the Hand questionnaires mentioned above. They may want to examine some or all of the check lists and evaluation instruments listed in the previous section. The check lists cited at the end of this chapter may be adapted for use by the local committee. Check lists made by outsiders, however, should not be used until the local faculty and parents have had an opportunity to study them and make additions and revisions in the light of local needs and conditions.

The third step is the actual evaluation of the present program by the local staff, parents, pupils, and consultants. In one school system, after the

Evaluating the Creative Product

How to evaluate the creative product is a problem that bothers many teachers. In their desire to be democratic, they have often involved pupils in the evaluation of one another's work. After a work period, each picture, story, or report is displayed or read, and the teacher asks, "What can we tell James about his picture (or story, or report)?" There are certain dangers in this technique. Children can be devastatingly cruel in their comments, and they can use the evaluation period to pay off personal grudges they hold against one another. Also, continual use of the group to bring a child into line may have the effect of producing a dangerous conformity to group opinion, which can stifle originality and creativity and make a child afraid to be different. Pictures can be shared, as in this photo, but not exhibited for criticism.

On the other hand, children need to be helped to face reality. The child who paints a stiff and stilted picture of a little house with smoke coming out of the chimney should not be praised as if he had created a modern masterpiece. It is the teacher's task to encourage him to loosen up, to use color more freely, to be more creative in his art expression. This task should not be delegated to the group.

How far the teacher goes in commenting upon children's art work depends upon her own development. If a teacher's art appreciation stopped with "The Horse Fair," or if she is suspicious of anything more recent than Winslow Homer, she may need to build up her own art background before she can help children. In art—as in literature and music—it is probably safer for the teacher to accept many things uncritically than to shape children's perceptions along substandard lines.

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Teaching a Foreign Language

In the reappraisal of American education following Sputnik has come the conviction that some children—perhaps many—could and should receive greater intellectual challenge in public schools. Two fields in particular are receiving greater emphasis at the elementary level—the teaching of science and the teaching of a foreign language. This latter field is emphasized because it is generally recognized that America will have more and more need for other languages in a world that is becoming smaller and smaller. It is emphasized at the elementary level because, although we cannot say with any degree of definiteness that language study is best begun at any one grade level, nevertheless it is obvious that younger children learn a foreign language more easily than older. The fourth grade has been arbitrarily selected by many school systems as the level for beginning instruction. Either Spanish or French is commonly taught, with a few school boards providing for instruction in either Russian or German on a voluntary basis.

After the financial, the greatest hurdle to be overcome in establishing a program of foreign language teaching in the elementary school is that of finding staff who know both the language and methods of teaching young children. Ideally instruction can best be given by the classroom teacher, who, in addition to teaching a regularly scheduled lesson each day can also use the language in giving directions and in informal conversations Unfortunately, not enough classroom teachers have sufficient background to do this. Sometimes the teacher is a special teacher who goes from school to school, giving thirty minutes of instruction to a class each day. The many excellent records and tapes available today supplement the instruction.

Teaching methods for beginners emphasize the aural-oral approach. The aim of instruction is to train the ear to hear accurately and the voice to form new sounds without accent. Often not a word of English is spoken during the lesson. The teacher, for example, may enter the room with a box of toys. He greets the children and with appropriate gestures indicates that he wants them to repeat "Bon jour, M. Martin" after him in return. He then calls upon individual pupils to greet him also, thus providing for drill upon the phrase. Next he holds up a doll selected from the box of toys. When he says, "Voici une poupée," it is not difficult for a child to figure out that "une poupée" is a doll, and to learn to say, "C'est une poupée" when he is asked what the toy is.

Emphasis upon the aural-oral approach need not preclude the teacher's placing an occasional phrase upon the board. Sometimes children learn to listen incorrectly, as anyone who has sung "The Cross-Eyed Bear" for "The Cross I Bear" can attest. Visual cues, sparingly used, will not detract from auditory training and may indeed aid its accuracy. Note that the children in the classroom pictured here have a list of the fruits that may be purchased at the local market, to be consulted as they make their purchases.

© (Photo: Hunter Elementary School; Lucien Aigner, from Monkmeyer Press Photo Service)

Summary

1. There is a need for systematic and valid procedures for evaluating the extent to which the elementary school is achieving the purposes for which it exists in our society.

2. Modern procedures for evaluating the program of the elementary school reflect the principles involved in the democratic process.

3. Recent practices in evaluating the elementary school are based on the idea that evaluation should be continuous and should come from within the school system.

4. The local school staff assisted by competent consultants evaluates the school in the light of objectives set up through the cooperative action of teachers, administrators, pupils, parents, and other laymen.

5. A satisfactory appraisal of the school must take into account the school's philosophy, organization, administrative and supervisory procedures, and curriculum, the efficiency of school personnel, the methods of teaching, and the quality and suitability of the physical plant.

6. An appraisal of the school program is of no value unless the findings are used as a basis for improvement; parents, teachers, and pupils should be given accurate information in regard to the strong and weak elements of the program so that they can help improve it.

7. The staff of the elementary school should be continuously seeking promising instruments and procedures that may be used to make the evaluation of the school program more thorough.

8. Active participation by the citizens in the community in a continuous, objective evaluation of the schools is essential to protect them from unfair, unreasonable, and unjustified attacks.

SOME PROBLEMS AND PROJECTS

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1. A group of parents in Edgemont School has spearheaded a movement to promote more attention to the three R's in the school. They have voiced their arguments to the Board of Education, the Superintendent of Schools, and the newspapers. There are too many frills in Edgemont, they claim. The whole program has been watered down, and the children are not learning to read, to spell, and to figure in the way they should.

What line of action should the teachers and principal of Edgemont School take? What suggestions for cooperative study have been made in this chapter that might help? How might such a cooperative study be initiated? What evaluation techniques might be employed?

2. Suppose that a cooperative study of Edgemont's program revealed that the children were approximately a grade below the norm on standardized tests in reading, slightly less than a grade below in arithmetic, and more than a grade below in spelling. What other kinds of information will the staff need before reaching the conclusion that the instructional program is at fault? Of what use would a test of intelligence be? What other factors should be taken into account in interpreting results of both the achievement and the intelligence tests?

3. Suppose, after a careful study of all the facts, that the staff of Edgemont School decides that the pupils are not up to par in the basic skills. What steps can the staff take to remedy the situation? Should they reveal their findings to parents?

4. Here are some evaluative procedures that can be used in gathering data on children's behavior:

parent conferences	intelligence tests
children's original stories	achievement tests
children's book reviews	observations of behavior
sociometric tests	interviews with pupils

What kinds of information might each of the above yield? If you have access to raw data derived from any of these procedures, analyze them and report results to your classmates.

Prescott's, The Child in the Educative Process (McGraw-Hill), will be useful for this purpose.

5. A prominent educator has made the statement that "Public schools are easy schools." A prominent sociologist laments the fact that the curriculum of the elementary school emphasizes a very narrow range of mental problems and skills and does not provide enough opportunities for pupils to develop reason, insight, inventiveness, and imagination.

Observe a first grade in action. What percentage of pupil time is spent on routine tasks—coloring, filling in blanks in workbooks, copying material from the blackboard, etc.—and what percentage in intellectually challenging activities? Do you find any evidence in your analysis to support the statements above?

Read Part III, "Morning School," in *One Boy's Day* by Barker and Wright (Harper & Brothers, 1951). This is the record of a seven-year-old boy's morning in a second grade. Analyze Raymond's morning in terms of its intellectual challenge to him.

6. The parents at Wilson School want a program that is intellectually challenging for their children; they are also concerned about the personal-social adjustment of their offspring. The teachers and supervisor at Wilson School are interested in having the children cover certain minimum essentials defined in terms of three reading books, three workbooks, one arithmetic book, one social-studies book, one science book, and one health book.

What problems in evaluation does this conflict pose? Can there be cooperative evaluation by parents and faculty under such circumstances? What must be done prior to working out evaluation procedures?

7. In the United States, public schools belong to the people. Increasingly, ways are being found for the people to participate in the work of the school. With increased participation comes the problem of distinguishing between what are the areas of decision-making for the layman and educator together and what are the areas for the educator alone. Here are examples of decisions that must be made:

   a. How is good citizenship to be defined?
   b. How should reading be taught in Grade 1?
   c. How much time should be allotted to spelling in the weekly schedule?
   d. What should be the goal of science teaching?
   e. Should sex education be taught in the schools?

Which of these questions should be decided by educators alone and which by educators and laymen together? What principle might be set up as a guide in making these decisions?

8. There are many questions regarding the program of the elementary school for which a teacher has only intuitive answers rather than answers based upon evidence. An elementary principal would like to know how children in a combination second and third grade under a particular teacher will achieve in reading as compared with a group comparable in ability but in separate grades. A first-grade teacher wants information on how well children who have had a particular kind of kindergarten experience compare in achievement with those of similar ability who have had none. Questions such as these that are specific to a particular situation are not answered in the research literature. Other questions, not as specific, have not yet been

studied systematically. The past few years have seen an increasing trend on the part of master teachers, using methods of research, to seek answers for themselves.

In planning research on a teaching problem the principal or teacher first proposes a hypothesis or a possible solution to the problem. Then he designs an experiment. He may compare the performance of two different groups of pupils, one of which is being subjected to special treatment and the other of which is not. Or, he may compare the performance of the same group of pupils before and after trying a particular teaching technique. He will make every effort to keep constant all factors except the one that he is testing.

List some unsolved problems facing the classroom teacher or principal. Your observations of, or work with, children in the elementary school will be helpful here. Select one of these problems for special study. State possible hypotheses, predicting the outcome of solutions to the problem. Then describe a reasearch design to test the hypotheses. For help, see the bulletin, Practical Research Processes: A Guidebook in Research Methods for Practitioners in Education, by Fred P. Barnes (Illinois Curriculum Program, Office of the Superintendent of Public Instruction, Springfield, Ill.)

AN ILLUSTRATIVE CHECK LIST

No ready-made evaluation instrument should be used in a particular school until the local staff has had an opportunity to study it and make revisions, additions, and adaptations to suit local conditions. However, the check lists that follow, as well as the manuals described above, provide valuable help for a staff that is developing an instrument for locating the strengths and weaknesses of its program and facilities.

Rating Scale: The following definitions of scale points emphasize the presence or absence of the condition, facility, or practice and the degree of adequacy.

M—means that the condition, facility, or practice is missing.

1—means that the condition, facility, or practice exists to a limited extent. (It exists in some classrooms but is not typical of the whole school; or it is of doubtful quality.)

2—means that the condition, facility, or practice exists to a considerable extent. (It is rather typical of the school as a whole; or it is of fair quality.)

3—means that the condition, facility, or practice exists to a great extent. (It is practically universal throughout the school; or it is of excellent quality.)

SECTION A. GENERAL OPERATIONAL PRACTICES AND FACILITIES				
V. <u>The</u> <u>Objectives</u> <u>of</u> <u>the</u> <u>School</u>	M	1	2	3
1. The objectives of the school are stated in writing.				
2. The objectives are formulated cooperatively by pupils, teachers, administrators, and parents.				
3. The objectives are subject to continuous study and revision.				
4. There is continuous effort to develop understanding of objectives by teachers, pupils, and parents.				
5. The objectives emphasize physical, social, and emotional growth, as well as mental growth.				
6. The objectives are stated in terms of desirable changes in behavior.				
7. The objectives recognize individual differences in interests, abilities, and needs of pupils.				
8. The objectives emphasize democratic living and values.				
9. The objectives recognize the need for developing command of the fundamental processes.				
10. The objectives recognize the importance of developing the creative abilities of children.				
11. The objectives recognize the need for developing skill in human relations.				
12. The objectives recognize the importance of education for democratic citizenship.				
13. The objectives are limited to those that the school has a reasonable chance to achieve.				
14. The objectives recognize the need for helping pupils become increasingly self-directing.				

In what respects are the objectives of the school most commendable?

In what respects are the objectives of the school in greatest need of improvement?

VI. Administration and Supervision	M	1	2	3
15. The school has a full-time, nonteaching principal.				
16. The school provides secretarial services for the professional staff.				
The principal:				
17. Encourages teachers to participate in the formulation of school policies.				
18. Assists teachers in obtaining needed instructional materials.				
19. Helps new teachers become oriented to the school and community.				
20. Encourages and facilitates in-service growth of teachers.				
21. Takes an interest in the personal problems and welfare of teachers.				
22. Actively promotes school and community cooperation.				
23. Devotes a major portion of his time to the supervision of instruction.				
The supervisor:				
24. Provides help in improving teaching-learning situations.				
25. Arranges for consultants to help with instructional problems.				
26. Conducts workshops or conferences on instructional problems.				
27. Helps teachers and principals obtain needed instructional materials.				
28. Encourages experimentation with new methods and materials.				
29. Works with individual teachers needing or asking for help.				
30. Takes the lead in working for good salaries and working conditions for the staff.				

In what respects are administration and supervision most commendable?

In what respect are administration and supervision in greatest need of improvement?

VII. Curriculum Organization and Cooperative Planning	M	1	2	3
31. The school staff engages in continuous study, planning, and evaluation of the curriculum.				
32. Study of the conditions, needs, and resources of the community is a regular part of the curriculum.				
33. The study of developmental needs of children is emphasized in curriculum-planning.				
34. Parents participate systematically in curriculum study, planning, and evaluation.				
35. Pupils participate systematically in curriculum study, planning, and evaluation.				
36. Curriculum organization provides for continuity and sequence in learning the fundamental subjects.				
37. Class schedules are flexible enough to take advantage of unexpected events.				
38. Large blocks of time within the school day are provided for unit teaching.				
39. Curriculum organization provides for both direct teaching of subjects and unified activities.				
40. Teachers meetings are held in rooms that permit informal, face-to-face communication.				
41. School time is provided for committees working on curriculum-improvement projects.				
42. The plan of faculty organization originates with the faculty.				
43. Teachers have an opportunity to work on phases of the program in which they are most interested.				
44. Teacher-pupil planning in classrooms is encouraged.				
45. Committee assignments are well distributed among members of the faculty.				

In what respects are curriculum organization and cooperative-planning most commendable?

In what respects are curriculum organization and cooperative-planning in greatest need of improvement?

VIII. <u>Evaluating</u> <u>and</u> <u>Reporting</u> <u>Pupil</u> <u>Progress</u>	M	1	2	3

46. The evaluation program is comprehensive.
    (Information is obtained on mental ability,
    achievement, personal—social adjustment,
    physical status, interests, attitudes, work—
    study skills, creative expression, and home—
    community backgrounds of pupils.)

47. Pupil progress is evaluated *continuously*
    instead of merely at stated intervals.

48. Pupils participate, under the guidance of
    the teacher, in the evaluation of their own
    progress.

49. Information about pupils is obtained
    regularly from parents, *community* agencies,
    and public officials.

50. A comprehensive system of cumulative
    records is maintained.

51. Teachers use a variety of evaluation
    instruments and procedures such as syste—
    matic observation, interviews, tests,
    anecdotal records, *sociograms*, and *case
    studies.*

52. Teachers use the information they have
    about children to adapt instruction to
    individual differences.

53. The system of reporting to parents is
    developed cooperatively by pupils, parents,
    teachers, and administrators.

54. Reports to parents utilize parent—teacher
    conferences, personal letters, telephone
    calls, and home visits.

55. Services of a psychologist and or psychi—
    atrist are available for referral by
    parents and teachers.

56. Reports to parents are made whenever there
    is a need for them rather than merely at
    stated intervals.

57. Reports to parents are *accurate, diagnostic,*
    and constructive.

58. Parents and teachers understand the objec—
    tives of each curriculum area on which
    pupil progress is evaluated.

In what respects are evaluation and reporting to parents most
commendable?

What aspects of the program are in greatest need of improvement?

IX. The Quality of Living and Learning in Classrooms	M	1	2	3
59. The human relations in the classrooms are comfortable, free from excessive tensions, and conducive to learning.				
60. Children are free to make mistakes, ask questions, tell about their own experiences, and reveal their honest feelings.				
61. Teachers help pupils establish worthwhile goals toward which to work.				
62. Children are encouraged to make choices, exercise initiative, and assume responsibilities.				
63. Pupils enter into all their learning experiences with a high degree of enthusiasm, interest, and purpose.				
64. Pupils are encouraged to work up to the limit of their capacities.				
65. The physical arrangement of the room provides centers for various interests or activities such as a library corner, a science center, and an art center.				
66. Children are encouraged to do some things together just for relaxation or enjoyment—using poetry, music, story-telling, rhythms, and conversation.				
67. The physical environment of classrooms is healthful, comfortable, and conducive to learning.				
68. Classroom activities are varied so that all pupils may participate with interest and some degree of success.				
69. People, places, and things in the community are utilized in the instructional program.				
70. Pupils learn the fundamental skills through use in meaningful situations.				
71. A great variety of learning materials, media, and resources is provided—books, maps, globes, films, etc.				
72. Multiple types of grouping are utilized to meet the interests, needs, and abilities of children.				
73. Learning resources are selected and used for clearly understood purposes.				
74. Units of work are selected wisely and used effectively.				

In what respects are living and learning in the classrooms most commendable?

In what respects are living and learning in the classrooms in greatest need of improvement?

X. The <u>School Plant</u>	M	1	2	3
75. The school site is large enough to provide space for driveways, parking space, garden plots, and differentiated play areas for older and younger children (five acres plus one acre for each 100 pupils).				
76. The school site is maintained in good condition and appearance.				
77. The school building is planned to house a modern program of elementary education.				
78. Classrooms are large enough to permit multiple learning activities and adequate storage space (approximately 1000 square feet for 25–30 pupils).				
79. Classrooms have adequate heating, lighting, and ventilation for the health and comfort of pupils.				
80. Teachers, pupils, and custodians cooperate to make classrooms attractive and usable.				
81. Toilet and lavatory facilities provided for pupils and teachers are adequate in number and location.				
82. One sanitary drinking fountain is provided for each 50 pupils.				
83. Toilet, lavatory, and drinking fountain equipment is kept in good repair.				
84. Adequate space and equipment are available for art, music, and physical education.				
85. The administration area includes a principal's office, a reception room, and a conference room.				
86. The school has an auditorium or assembly room large enough to accommodate the larger groups that attend school functions.				
87. The school has a central library of sufficient size to serve as a materials center.				
88. The school has a cafeteria or all-purpose room that can be used for many school activities.				
89. The school has a teachers' lounge equipped with comfortable furniture and toilet facilities.				
90. The school has an adequate supply of audio-visual equipment, and provision is made for darkening classrooms.				

In what respects is the physical plant most commendable?

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In what respects is the physical plant in greatest need of improvement?

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SECTION B. CURRICULUM AREAS

XI. Arithmetic	M	1	2	3
91. Instruction is adapted to abilities, achievements, and needs of individual pupils.				.
92. Textbooks are used as guides rather than followed verbatim.				
93. Teacher-made tests and standardized tests are used systematically for guidance purposes.				
94. *Use in meaningful situations rather than abstract drill is emphasized.*				
95. Drills are short, meaningful, and related to specific number needs of pupils.				
96. Many sensory and manipulative materials are used to make concepts meaningful.				
97. Pupils are helped to use self-evaluation devices in checking their own progress.				
98. Attention is given to the development of good work habits.				
99. Systematic procedures are used to develop an understanding of *the number system.*				
100. Pupils receive systematic instruction in problem-solving.				
101. Arithmetic instruction is closely related to out-of-school living.				
102. Systematic efforts are made to help children understand the language of mathematics.				
103. The school maintains a continuous program of in-service education of teachers to keep them informed about research on the teaching of arithmetic.				
104. *Systematic attention is given to providing continuity in the child's learning experiences within each grade and from one grade to another.*				

In what respects is the arithmetic program most commendable?

In what respects is the arithmetic program in greatest need of improvement?

XII. <u>Arts</u> <u>and</u> <u>Crafts</u>	M	1	2	3
105. Pupils have opportunities to work with a variety of art media.				
106. Art is correlated with other curriculum areas such as language arts and social studies.				
107. Art instruction is adapted to individual differences in aptitude and interest.				
108. An adequate supply of art materials is provided.				
109. Opportunities are provided for a variety of simple manual activities—sawing, pasting, constructing, etc.			·	
110. Special events and holidays are used to motivate art work.				
111. Art resources of the community such as museums, exhibits, and local talent are utilized in the school program.				
112. In-service education programs are provided to help teachers increase their competence in art teaching.				
113. Arts and crafts are provided for all pupils rather than merely for the talented few.				
114. Provision is made for suitable display of children's art work.				
115. Displays are artistically arranged and changed frequently.				
116. Children learn to recognize some of the works of the old masters.				
117. Children are encouraged to express their own feelings and ideas through art.				
118. The school staff engages in continuous study and revision of the art program.				

In what respects is the arts-and-crafts program most commendable?

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In what respects is the arts-and-crafts program in greatest need of improvement?

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XIII. Health, Physical Education, and Safety	M	1	2	3
119. A definite time is set aside in the schedule for teaching health, physical education, and safety.				
120. An adequate supply of books and other instructional materials is provided for health, physical education, and safety.				
121. Events in school living such as the lunch period, physical examinations, and immunizations are utilized for teaching health.				
122. The curriculum in health is well-balanced in terms of major areas such as nutrition, rest, safety, communicable diseases, clothing, personal hygiene, posture, and mental health.				
123. A safety council or committee coordinates the safety program.				
124. Perfect attendance certificates and other artificial awards that encourage children to attend school when they are ill are avoided.				
125. Lists of school health policies are available to pupils, teachers, and parents.				
126. Teachers observe pupils systematically for symptoms of abnormality.				
127. Physical examinations are scheduled regularly for all pupils.				
128. One or more persons on the school staff are competent to administer first aid.				
129. The physical-education program is well-balanced in terms of rhythmic activities, individual skills, games of low organization, and games of relatively high organization.				
130. Physical education is provided for all pupils rather than merely competitive athletics for a few.				
131. Fire drills and other exit drills are held regularly.				
132. The building is inspected regularly for fire and safety hazards.				
133. The school staff cooperates actively with community agencies, parents, and physicians on problems of health, recreation, and safety.				

In what respects is the program in health, physical education, and safety most commendable?

In what respects is the program in health, physical education, and safety in greatest need of improvement?

XIV. The <u>Language Arts</u>	M	1	2	3
134. An adequate supply of materials is available for the language arts.				
135. A sound reading readiness program precedes the introduction of book reading.				
136. Many firsthand experiences are provided for concept-building.				
137. Teachers provide for individual differences through the use of grouping and the use of differentiated materials.				
138. Word-recognition techniques, including phonics, are stressed at all levels.				
139. Vocabulary development and comprehension are stressed at all levels.				
140. Remedial instruction is provided for pupils with particular reading difficulties.				
141. Teacher-made tests and standardized tests are used to evaluate pupil progress in reading.				
142. Children are guided in the selection and evaluation of books to read.				
143. Written and oral language activities provide many opportunities for creative self-expression.				
144. Pupils are given systematic instruction in listening.				
145. All spelling words are introduced in sentences.				
146. Visual, auditory, and kinesthetic methods are used in teaching spelling.				
147. Children are taught to proofread written work in all subjects.				
148. Attention is given to legible, neat writing in all subjects.				
149. Many language-arts activities develop out of other curriculum areas such as health and social studies.				
150. The language-arts program is subject to continuous study and revision by the school staff.				

In what respects is the language-arts program most commendable?

In what respects is the language-arts program in greatest need of improvement?

XV. Music	M	1	2	3

151. The music-education program is well balanced in terms of various vocal and instrumental activities.

152. The program emphasizes the enjoyment of music, the development of skills, and the understanding of music.

153. Special talents in music are discovered and encouraged.

154. Systematic efforts are made to help children develop an appreciation of our American musical heritage.

155. Provision is made for developing an awareness of music as an expression of the culture of all people.

156. Children have an opportunity to create simple melodies, rhythms, and dramatizations.

157. Adequate teaching aids and materials are available for varied musical activities.

158. Music is correlated with other school subjects such as social studies, language arts, and science.

159. A specialist in music is employed as a consultant or coordinator to assist classroom teachers.

160. Music education is provided for all pupils rather than merely for the talented few.

161. Music instruction is related to individual differences in pupils.

162. *In-service education is provided for teachers to help them teach music more effectively.*

163. Parents and other interested citizens are kept informed about the objectives and accomplishments of the school music program.

164. Evaluation of pupil progress is in terms of aptitudes of pupils rather than in terms of adult standards.

165. Pupils are encouraged to apply their knowledge and skills in out-of-school music activities.

In what respects is the music program most commendable?

In what respects is the music program in greatest need of improvement?

XVI. Science	M	1	2	3

166. The content of the science program is well balanced in terms of the principal areas such as living things, earth and universe, matter and energy, and how man controls his environment.

167. Opportunities are provided for children to ask questions, relate experiences, and try things out.

168. A variety of learning activities is provided such as field trips, demonstrations, experiments, use of resource persons, and reading.

169. Classrooms contain many interesting books, magazines, pamphlets, pictures, and other materials dealing with various aspects of science.

170. Seasonal changes, weather reports, temperature records and other uses of science in every-day life are used to motivate the study of science.

171. Adequate equipment is available for simple science experiments.

172. Children bring science materials of various kinds to class for study and experimentation.

173. Children learn about growing plants and animals by helping to care for them at school.

174. Periodic checks are made on the ability of pupils to observe accurately, locate information, and distinguish between fact and fancy.

175. Children participate in the selection and planning of science activities.

176. In-service education programs are provided to help teachers keep abreast of new developments in science teaching.

177. Systematic efforts are made to teach critical thinking and the use of the scientific method.

178. Pupils participate in the evaluation of their own progress in science.

179. The program emphasizes the contributions of science to daily living.

180. Pupils are encouraged to make collections of science realia.

In what respects is the science program most commendable?

In what respects is the science program in greatest need of improvement? .

XVII. <u>Social</u> <u>Studies</u>	U	1	2	3
181. The social-studies program is well balanced in terms of significant aspects of living.				
182. The program is flexible enough to take advantage of current happenings in community, state, and nation.				
183. Emphasis is placed on the social, cultural, and educational aspects of problems as well as on political and military phases.				
184. The sequence of learning experiences provides for continuous growth by building on previous experience and extending and enriching experience.				
185. The program is closely geared to developmental growth levels of pupils.				
186. Teaching procedures utilize units of work and other forms of group work in which pupils assume responsibilities and plan and evaluate activities.				
187. Reading materials are provided on a wide variety of topics and covering a wide range of reading abilities.				
188. Attention is given to developing such skills as note-taking, outlining, summarizing, and reporting.				
189. Learning experiences are sufficiently varied so that every child can participate with satisfaction and some degree of success.				
190. Provision is made for correlating the social studies with other curriculum areas such as language arts, science, art, and music.				
191. Pupil progress is evaluated in terms of changes in behavior as well as in terms of knowledge and skills.				
192. Children use democratic procedures in choosing leaders, planning and executing activities, and evaluating outcomes.				
193. Children study group life in the community, such as the local government, civic organizations, business and industry, and recreation and amusement.				
194. Children assume responsibilities for the care of the classroom, building, and grounds.				

In what respects is the social-studies program most commendable?

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In what respects is the social-studies program in greatest need of improvement?

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SELECTED READINGS

ADAMS, HAROLD P., and DICKEY, FRANK G., *Basic Principles of Supervision* (American Book Co., 1953). Chapter 12 deals with the principles of evaluation. Appendixes A and B provide check lists for evaluating the school program.

ASSOCIATION FOR SUPERVISION AND CURRICULUM DEVELOPMENT, *Better Than Rating* (National Education Association, 1951). This pamphlet provides guiding principles for evaluating the effectiveness of teaching.

BEECHER, DWIGHT E., *The Teaching Evaluation Record* (Syracuse University Press, 1953). This 16-page instrument not only provides a 32-item check list for evaluating teaching but supplies *sample evidence* to be considered in evaluating each item.

CASWELL, HOLLIS L., and FOSHAY, A. W., *Education in the Elementary School* (2nd ed., American Book Co., 1950). Chapter 3, "Characteristics of a Good Elementary School," provides a check list on general characteristics of a good elementary school.

DREIMAN, DAVID B., *How to Get Better Schools* (Harper & Brothers, 1956). Contains the story of the National Citizens Commission for the Public Schools. Appendix A presents a list of questions about the schools or which citizens should seek answers.

HERRICK, VIRGIL E., et al., *The Elementary School* (Prentice-Hall, Inc., 1956). Chapter 17 presents valuable suggestions relating to evaluating the elementary-school program. Provides an analysis of several means currently used to identify strengths and weaknesses of school programs including the school survey, the cooperative survey, and the cooperative study.

HICKS, H. J., *Administrative Leadership in the Elementary School* (The Ronald Press, 1956). Chapter 20 contains suggestions for evaluating the program of the school.

IOWA COMMISSION ON TEACHER EDUCATION AND PROFESSIONAL STANDARDS, *What is a Good School?* (Des Moines, Iowa, 1950). This 40-page pamphlet lists criteria for a good school.

SHANE, HAROLD G., and McSWAIN, E. T., *Evaluation and the Elementary Curriculum* (rev. ed., Henry Holt and Co., 1958). Appendix C contains a selected and annotated bibliography of evaluation instruments for use in elementary schools.

SELECTED FILMS

Better Tomorrow. An 18-minute sound film that shows the modern approach to education used in three *New York City* schools. Emphasizes group projects closely related to community needs. Castle Films.

School in Centerville. A 20-minute sound film illustrating many of the essential features of a good school, such as teacher-pupil planning, study of community problems, and home-school-community cooperation. National Education Association.

Wilson Dam School. A 21-minute sound film showing how the daily activities and the wide use of instructional materials offer children the opportunity to learn by doing and by sharing experiences. Brandon Films.

The Recent Past and the Foreseeable · Future

CHAPTER

16

School and Society
in the Recent Past

Man has become too powerful and the
earth has become too small to allow
him the unwise use of his power. He
has to choose either the great decay or
the great embrace. There is nothing in
between —ROBERT ULICH

☐ SOON AFTER the atomic bomb
fell on Hiroshima in August 1945,
men began to realize that a new age
had been born; an age in which many
of the methods and products of man
would become obsolete. The release
of the energy of the atom was but a
symbol of the tremendous amount of
power that modern man has available
for either constructive or destructive
purposes. A decade after the atomic
bomb took 230,000 lives at Hiro-
shima, a single bomb three hundred
times as powerful had been produced,
and neither science nor technology
stand in the way of producing one
thirty thousand times as powerful.

Never before has so much infor-
mation been available concerning the
knowable present and the foreseeable
future. The layman has in the last
five years been provided with infor-
mation that in former years was the
exclusive possession of the expert.
The central theme in this informa-
tion is that the forces affecting the
lives of citizens today are so compli-
cated that it is necessary to learn
faster than ever before if we are to
understand what is going on about
us. The statement made by H. G.
Wells soon after World War I, that
"civilization is a race between educa-
tion and catastrophe," is even more
appropriate today.

Some Highlights of the Postwar Era

The period between the first atomic bomb and the first artificial earth satellite consisted of but a scant twelve years, but more spectacular changes were packed into those twelve years than in any comparable period in the history of this nation. The impact of this age of miracles on our way of life has not yet been fully measured. Any summary of the changes that have taken place must, therefore, be incomplete. The following are only a few of the more obvious changes.

Population trends

The population of the United States was about 100 million in 1917, about 144 million in 1947, and about 175 million in 1959. The impact of the population explosion on our schools, highways, hospitals, and other public services has been tremendous. The last time we had an unexpected upsurge in population, in the early years of the industrial revolution, people flocked to the great cities, where slums and other conditions developed that we are still trying to eliminate. Many problems have been raised by the recent population increase. How can our economy provide a high standard of living for these additional millions? In what kind of environment will they live? What chance will the children have for an adequate education?

The rapid increase in the total population of the United States represents only one aspect of the population problem. Certain trends within the general population growth have implications for the future.

THE TREND TOWARD URBANIZATION. As the machine age has gone to the farm, the farm hand and the farm family have moved to the city. In 1790 only 5 per cent of our population lived in urban areas; by 1920 the percentage was 51, and by 1950 it was 64. According to most estimates, 85 per cent of the population lived in urban areas in 1957. A significant trend also is found in the tendency of the urban population to concentrate in a relatively few metropolitan areas. The population of the United States doubled between 1900 and 1950, but the population of 168 metropolitan areas increased three and a half times. Between 1940 and 1950, metropolitan areas absorbed 81 per cent of the total population growth and between 1950 and 1955 they absorbed 97 per cent.

Significant changes have also taken place in the distribution of the population within metropolitan areas—the trend toward suburban living. Between 1940 and 1950 the population of the suburbs increased by 35 per cent while the population of the central cities increased by 14 per cent; between 1950 and 1955 the suburbs increased in population by 25 per cent while that of the central cities was increasing by less than 4 per cent.

The educational implications of the rapid shift from rural to urban and suburban living have perhaps not yet been fully realized. However, a few of the consequences of making this shift in little more than a single generation can be identified. The difficulty that urban communities have experienced in providing school buildings and teachers for a tidal wave of children is well known. The responsibility for preparing children and youth for the changes in thought and action involved in the shift from rural to urban and suburban living is perhaps but dimly realized. The pattern of family living, altered immensely since the advent of the industrial revolution, has been influenced still more by the trend toward suburban living. Children whose fathers commute to work in the cities from homes in suburban areas are brought up almost entirely in a female society instead of having the advantages of guidance from both parents.

THE MIGRATION OF NEGROES FROM THE SOUTH. The migration of Negroes to the North and West and to urban centers represents one of the significant population trends of the last few decades. In 1860 92 per cent of the Negroes lived in the South, in 1910 89 per cent lived there, and by 1950 only 68 per cent lived there. In 1910 only 27 per cent of the Negroes in the United States lived in urban communities; by 1950 over 90 per cent of those living in the North and West were in urban communities and 48 per cent of those living in the South were in urban centers. The depression in the 1930's and the economic expansion during World War II provided the principal reasons for the large migrations of Negroes from the South and to urban communities.

The shift in the Negro population has created many new problems in the communities to which these families have moved, and in most instances the problems have been left on the doorstep of the school. Much attention has been given to the friction that has developed as a result of the recent Supreme Court decision outlawing segregation in the public schools. Less attention has been given to developing the insights, attitudes, and skills in human relations on the part of school personnel required for integrating this new segment of the school population into the life and program of the school with a minimum of friction.[2] Our success or failure in meeting this problem may well be the deciding factor in the contest for the minds of men now being waged between the peoples of the free world and Soviet Russia. A large majority of the people in the world are colored.

CHANGES IN THE AGE COMPOSITION OF THE POPULATION. The percentage of the total population included in the age group between 20 and 65 years of

[1] Barbara Ward, "Forethought for Tomorrow's Needs," in *Current Issues in Higher Education* (National Education Association, 1957), pp. 31–41.
[2] Phillip M. Hauser, "Population Facts and Factors," in *Contemporary Society* (The National Elementary Principal, National Education Association, 1957), pp. 32–36.

age, regarded as the bulk of the working population, declined between 1940 and 1950 and is expected to decline still more by 1965. In 1940 this group composed 58.7 per cent of the total population, in 1950 it was down to 57.9 per cent, and it is estimated that by 1965 it will be down to 50 per cent. The postwar baby boom resulted in a gigantic bulge in the elementary-school population—children 5 to 14 years of age—which is expected to continue for a decade or more. This age group increased by 8.4 per cent between 1940 and 1950, by 37 per cent between 1940 and 1955, and by 1965 an increase of from 59 to 74 per cent over the 1950 level is expected. The percentage of the total population included in the group over 65 years of age has been increasing. It was 5.6 per cent in 1930, 6.9 per cent in 1940, and 8.2 per cent in 1950. The average life span, which was 50 years in 1900, increased to 70 years by 1957 and is expected to be 80 years by 1965.

These population trends have many educational implications. Unprecedented increases in elementary-school enrollments have created serious administrative problems and have hampered efforts to focus attention on improving the quality of instruction. The necessity of providing economic security for increasing numbers of old people limits the ability of states to provide sufficient funds for the education of increasing numbers of children. These problems are related to other changes in the culture, such as the increased productivity of labor, the increase in the national output, and the need for more technical training on the part of the labor force in the future.

Enrollment trends and expenditures for public education

According to the *Journal of the National Education Association*, January 1958, the total enrollment in elementary and secondary schools was 33,508,814 for the school year 1957–1958. This was almost 40 per cent larger than the enrollment of ten years previously. Over the last decade enrollments in elementary and secondary schools have been going up an average of 1,000,000 per year. College and university enrollments grew from 1,331,138 in 1946 to 3,450,000 in 1957. It is estimated that college and university enrollments will reach 7,000,000 by 1975.

The rapid increase in enrollments from the kindergarten through the university poses many problems. Will we turn out a large number of educated men and women for whom there will be no jobs? How can we staff elementary schools, secondary schools, and colleges that have increasing enrollments? The answer to the first question lies in the fact that the technological revolution, already under way, requires an enormous increase in the number of trained and educated men and women. The answer to the second question can be found only by a concerted effort to strengthen our teacher

education programs and by making teaching more attractive, financially and otherwise.

The total cost of public elementary and secondary schools for 1957–1958, including capital outlay, interest, and debt retirement, was approximately $12,000,000,000. However, this represents only a little more than 3 per cent of the national income, and is about the same percentage of the national income that we have been spending on public elementary and secondary schools for many years.

The instructional staff of elementary and secondary schools increased from less than 900,000 in 1947 to 1,329,551 in 1957, an increase of about 5 per cent per year. The shortage of qualified teachers in 1957 was reported to be 135,000. A bachelor's degree or higher was required for the lowest certificate for high-school teachers in 1957 in all states but one. The national average for salaries for classroom teachers during 1956–1957 was $4,350. Teachers' salaries, although showing small dollar rises in the last few years, lag behind wages and salaries as a whole. Teachers in some states receive less in salaries than unskilled laborers on federal road-building projects.

The productivity of industry

The national income from industry increased from $197,168,000,000 in 1947 to $343,620,000,000 in 1957. It is estimated that it will reach $500,000,000,000 by 1965. The per capita cash income grew from $600 in 1900 to $2,000 in 1957. It is estimated that it will be $5,000 by the year 2000. Hours in the working week decreased from 60 in 1900 to 40 in 1957. It is estimated that we will have a 24-hour work week by 2000. In 1850, 13 per cent of all work output in the United States was by human muscles; by 1957 this was down to less than 1 per cent. In 1950 American business firms spent 1 billion dollars for research on new products, in 1955 they spent 4 billion dollars, and in 1957 they spent 7 billion dollars. In 1957 less than $75,000,000 was spent on research in education by state and local governments. Between 1947 and 1957 110 billion dollars was spent in the United States for new houses and apartments, 32 billion dollars for new schools, hospitals, and government buildings, and 28 billion dollars for highways. In 1945 there were 56 million radio sets in use in the United States, by 1957 there were 149 million radio sets and 46 million television sets in use.

Three out of every four families in the United States owned an automobile in 1957. In that year there were 56 million cars on the road, compared with 26 million at the end of World War II. Twelve out of every hundred families owned more than one car, compared with only three out of every hundred families a decade before. The rapid increase in the number

and size of automobiles created problems for parking lots, street departments, and highway commissions. In 1957, for example, the United States embarked on a 15-year program to build 50,000 miles of new highways. Highways, old-age assistance, and public schools have been the principal competitors for appropriations from state legislatures.

The extent of the revolution in travel cannot be measured alone by the increase in number and size of automobiles and the improvement in highways. The number of passenger miles carried by the world's commercial air fleet increased from about 12½ billion in 1947 to more than 45 billion in 1957. Some idea of the increase in speed of airplanes can be gained from the fact that it took Lindberg and "The Spirit of Saint Louis" 33 hours and 32 minutes to fly from New York to Paris in 1927; in 1957, "The Spirit of Saint Louis II" made it in 6 hours and 38 minutes.

It was estimated in 1957 that a single worker in the United States produced six times as much as his great grandfather did one hundred years before; that the United States, with a sixth of the population of the world and a seventh of its area, was producing half of the world's manufactured goods; and that, barring some major catastrophe, this country would continue to produce miracles in terms of energy and output.[3]

What has caused these miracles of production? Where must we look in the future for a continuation of our prosperity? Our country's size and its vast store of natural resources have been major factors. But this wide expanse and these natural resources existed for thousands of years practically unaltered by the hand and brain of man. Other nations have had a wide expanse of territory and an abundance of natural resources, but have failed to achieve a standard of living comparable to ours. The magic of America can be explained only in part in terms of size and natural resources. Human skills and human qualities released by a program of universal education that places a premium on the worth of every human being have made the difference in the past and will continue to play a major role in the future.

The impact of automation

The word automation has been used increasingly since about 1944. It has become a favorite topic of discussion at conventions of representatives of management, labor, and education. Books, popular magazines, and professional journals have been devoting an increasing amount of space to it in recent years. In essence it means that certain jobs such as handling materials,

[3] August Heckscher, "The Next Two Decades: Coming Changes in American Life," in *Current Issues in Higher Education* (Association for Higher Education, National Education Association, 1957), pp. 1–2.

processing data, and making routine judgments are done by machines rather than by human hands in a fraction of the time and at a lower cost.[4]

Examples of the way automation works exist in abundance. A large banking chain is converting its daily check-clearing activities into an automated system that will carry out the whole procedure, including the preparation and possibly the mailing of monthly statements.[5] Westinghouse has a factory at Columbus, Ohio, with 27 miles of conveyors, that can produce two refrigerators per minute without the direct control of human hands. A new automated plant can produce 1,000 radios a day with only two workers, an operation that previously required 200 workers. One man at the console of a data-processing machine owned by Monsanto Chemical Company has at his command the computing ability of 25,000 trained mathematicians.[6]

Most authorities agree that the impact of automation will not be large-scale unemployment, but a demand for more highly educated and skilled workers. As mass production upgraded the unskilled worker into the semi-skilled worker and machine operator of today, automation will upgrade the semiskilled worker into a highly skilled technician. The increased demand for men who can think, plan programs, and make decisions has implications for education that are but dimly recognized today.

Promises and Threats

Woodrow Wilson once expressed the opinion that colleges should give to the country men who could distinguish between promises and threats. Change does not always represent progress, and some of the trends in our culture can easily become threats unless they are recognized and unless proper measures are taken to counteract their harmful effects. One writer has expressed it as follows: "Technology goes on with an ever-increasing rate of development, but we see little concern on the part of most people, even on the part of most 'educated' persons, as to how this technology is going to affect us all."[7]

The miraculous growth in industrial output, in population, and in other aspects of American life has been achieved only at a tremendous cost in energy consumption. Now the sources of energy upon which we have traditionally depended are becoming scarce. Although it is assumed that atomic energy will eventually be available to replace other sources and that solar

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[4] Peter F. Drucker, *America's Next Twenty Years* (Harper & Brothers, 1957), p. 18.

[5] S. E. Torsten Lund, "A Probable Image of the Future," *Educational Leadership* (National Education Association, October, 1957), pp. 7–14.

[6] William L. Maxwell, "The Impact of Automation on Education," *The Education Digest*, September 1957, pp. 23–26.

[7] Lund, op. cit., p. 9.

energy will also be harnessed, many technical problems remain to be solved before these sources can come into general use. Meantime, it may be necessary to revise our present energy-squandering way of life. The growing shortage of materials such as metals, wood, and fiber; the shortage of water; and the contamination of the atmosphere by our industries and by our military activities are other examples of growing pains that demand intelligent action.

Pressures to conform: threats to creativity

Many studies of changes in the American character call attention to pressures to conform and cultural blocks to creativity. One study identifies three types of people formed at "the knee of society" in different regions, eras, and groups: tradition-directed people, inner-directed people, and other-directed people. Industrialization, urbanization, and centralization in American life during recent decades have created a climate favorable to the development of other-directed people, who have a tendency to look to others for cues as to how to live.[8]

Another fascinating study of the shift in American ideology describes the organization man as he is prepared in schools and colleges and as he operates in corporations, foundations, laboratories, and other forms of group life. It concludes that education must play an important role in bringing about a reversal of current trends.[9]

Heckscher summarizes the new order in the United States by saying that we have changed from a society that owns things to a society that belongs to things. He says that, "Men worry less about getting on than about getting in." A case in point is the increasing number of college graduates who join the corporation that promises a career of security and a safe retirement. Material products are not regarded as possessions in the old-fashioned sense; rather, they are symbols of participation, and their value changes with the tastes and fashions of the group of which the individual is a part. He concludes that, "The question is not whether the prevalence of the group is bad. It is whether the conditions exist which give meaning to the group and make participation in it a liberating experience for the individual."[10]

Other pressures to conform have been recognized in the urge to persecute those whose views dissent from the majority, in the absence of strong political minority parties, and in the essential similarity of political parties. These pressures are also found in the schools in the form of emphasis on

[8] David Riesman, *The Lonely Crowd* (Yale University Press, 1950).
[9] William H. Whyte, Jr., *The Organization Man* (Simon & Schuster, 1956).
[10] Heckscher, op. cit.

group processes, group conformity, and group judgment. These practices have gained widespread acceptance in schools on the theory that the society in which the school exists is so competitive and individualistic that the school must counteract these conditions. Perhaps a better understanding of trends in the culture will result in no less emphasis on group processes, but in greater efforts to see to it that conditions exist that permit the individual to make unique contributions to group enterprises.

A new adventure in international relations

A reversal in our traditional foreign policy, which has occurred since the end of World War II, raises promises and threats that are more significant perhaps than changes in population, increased productivity of industry, and changes in the American character. The policy of isolationism, of avoiding "entangling alliances," dominated our dealings with other nations during the eighteenth and nineteenth centuries and was reaffirmed after World War I. By the end of World War II a majority of the members of both major political parties had become convinced that we do not inhabit the earth alone.

When we took active leadership in establishing the United Nations we left the more limited world of our fathers and embarked on a new and strange course, the implications of which could be but dimly understood at the time. We were convinced that peace and economic security depended not only on the actions of our own people and our own government, but upon the actions of the peoples of the world and of their governments as well. Before the end of hostilities in World War II, steps had been taken to establish the United Nations organization. It was assumed—by some leaders at least—that an international police force might be created to maintain peace and to prevent aggression. In 1944, when President Roosevelt was running for a fourth term, he said that the United Nations must have the power to act quickly and decisively to keep the peace—by force, if necessary. Hopes were high for an enduring peace that would relieve us of the burden of maintaining huge military forces and permit us to budget more of our income to schools, hospitals, roads, and other essential peacetime enterprises.

These hopes for a peaceful and law-abiding family of nations were doomed to disappointment and the world soon became divided into two armed camps, with Soviet Russia making a determined bid for world domination and the United States having no alternative but to counter the threat. The measures taken to counter the threat, to develop a program of joint action with other free nations of the world, have occupied the center of attention in national affairs and have made the postwar years an anxious age.

Helping real and potential allies to build up their military capabilities, helping them to avoid economic collapse, rendering technical assistance to underdeveloped areas through the Point Four Program, helping to organize and develop the North Atlantic Treaty Organization, providing most of the military force to stop Communist aggression in Korea, and supporting the United Nations are but a few of the measures taken. The period of international tensions has resulted in the largest peacetime military budget in our history, has upset the plans of our young men by requiring them to enter military service for extended periods, has subjected our economy to inflationary pressures, and has required thousands of our citizens to live in foreign countries.

The United Nations began in 1945 with fifty-one member governments, has added thirty-one members in twelve years, and only Russian-American conflicts prevent it from adding the German and Chinese governments to make it a world-wide society of nations. Over the years, the organization has become chiefly concerned with easing tensions between Russian and the United States. It has served as a useful forum where controversial matters could be discussed; as a brake, avoiding or postponing showdowns; and as an unarmed peace organization which could support its decisions only by the force of world opinion.[11]

The new role in world affairs came upon us so suddenly that we were not prepared to deal with it adequately. International problems are of such magnitude and complexity as to baffle our present generation. It is generally recognized that the schools have a major role to play in educating for intelligent world citizenship. Some promising efforts in this direction are already in operation, including the teacher exchange program, the Fulbright Scholarships for study abroad, and the large number of foreign students who are studying in American colleges.

The Elementary School in the Postwar Era

While changes in the culture have been taking place at a constantly accelerated rate, significant changes have also been occurring in the program of the elementary school. Some of these changes have been merely extensions or accelerations of trends that were under way in previous decades; others have been unique developments of the postwar era. Some changes have been made in response to circumstances existing in the culture; others have sprung from research and experimentation in education and in related disciplines.

[11] Demaree Bess, "Is the U. N. Old and Tired?" *The Saturday Evening Post,* February 15, 1958, pp. 25–89.

Many competent observers believe that changes in elementary-school programs have been coming about too slowly, and that major break-throughs must be achieved in the quantity and quality of elementary education if the schools are to do their part in preparing children to participate effectively in the complicated life of the next few decades. Otto has summarized the situation as follows: "Our present knowledge about children, *how they learn, their educational needs, the goals which elementary education should seek, and the services and facilities essential for achieving those goals is far ahead* of present practice in a great majority of elementary schools." [12]

A significant event in elementary education occurred in 1948, when the Educational Policies Commission published *Education for All American Children.* This report was the first comprehensive, nation-wide study of elementary education that had been published in approximately fifty years and required three years of study. [13] The staff of the Commission visited eighty superior elementary schools in various sections of the United States to locate forward-looking practices and trends. This report, together with many excellent evaluation manuals that have been developed in recent years, provides valuable criteria for evaluating elementary-school practices and facilities.

Changes in objectives

An editorial in *Life* magazine for July 31, 1950, called attention to the many material accomplishments of the five-year period following the end of World War II, and added this significant statement, "More encouraging still, there was a widespread discussion of the aims of education." Tyler lists "marked changes connected with the formulation of objectives" as one of the major steps in curriculum development since the turn of the century. [14] A study financed by the Russell Sage Foundation and published in 1953, provides a much more comprehensive treatment of elementary school objectives than has ever before been available. [15]

Events in the postwar period have increased the role of the United States in world affairs, have reduced the size of the world in terms of hours of travel, and have provided dramatic evidence of the interdependence of the people of the whole world. These developments have broadened the scope of educational objectives. Learning a second language, using air-age maps or

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[12] Henry J. Otto, *Elementary School Organization and Administration* (Appleton-Century-Crofts, 1954), p. 35.

[13] Educational Policies Commission, *Education for All American Children* (National Education Association, 1948).

[14] Ralph W. Tyler, "The Curriculum—Then and Now," *The Elementary School Journal,* April 1957, pp. 364–374.

[15] Nolan C. Kearney, *Elementary School Objectives* (Russell Sage Foundation, 1953).

polar projections, and studying problems of the world community are examples of the impact of the changing culture on educational objectives.[16]

Changes in the explanation of learning have also influenced elementary-school objectives. At the turn of the century, faculty psychology and formal discipline found expressions in educational objectives stated in terms of the memorization of bodies of subject matter. Today, educational objectives are stated in terms of changes in behavior, of the application of principles to actual problems of living, and of ability to interpret the meaning of reading material. An objective is regarded as a statement of the kind of behavior pattern the school seeks to have the pupil develop.

Changes in learning situations

Learning situations at the turn of the century, and to a great extent at the beginning of the postwar period, took the form of assignments, recitations, and exercises. Lesson plans were uniform for all members of the class and little attention was given to the readiness of pupils for these tasks or to their mental reaction to them. Curriculum guides developed in the last decade or so place much emphasis on motivation, relating each experience to the past experience of the pupil, and to problem-solving. They provide a large number of suggested learning experiences from which the teacher may select those that seem particularly appropriate for the whole class or for groups or individuals within the class. Units of work and individual projects that emphasize initiative and resourcefulness on the part of pupils and draw upon a great variety of sources for information are also being used more freely.

Changes in the organization of learning experiences

The trend toward bringing about more unity in the school experiences of boys and girls has been discussed in a previous chapter. Instead of eighteen or twenty subjects, each taught for a brief period during the school day with little or no relationship existing between them, it is the usual practice now to divide the school day into approximately six divisions devoted to broad fields such as language arts, social studies, and the like.

The postwar period has witnessed a continuation of the trend toward unity and a great deal of experimentation with various plans for providing more continuity in the learning experiences of children. Continuity is used

here to refer to efforts to arrange learning experiences for each pupil so that each new experience is built upon previous experiences and leads to higher levels of skill or to broader understanding. These experiments spring from the psychological principle that growth and learning are continuous. The practice of promoting children from one level to another in various subjects rather than from one grade to another, the ungraded primary, and the self-contained classroom are cases in point. These plans will be discussed in greater detail in Chapter 17.

Changes in elementary-school buildings

Elementary-school buildings constructed between 1947 and 1957 differ in important respects from those built earlier. Greater consideration has been given to the type of program to be carried on inside the buildings. Buildings with two or more stories and a basement have given way to one-story buildings; 74 per cent of those constructed in 1951 were one-story buildings.[17] The size of school sites has increased to permit driveways, parking areas, garden plots, and separate play areas for younger and older children. The average site for elementary-school buildings constructed in 1951 contained between 10 and 15 acres. Classrooms were larger; the typical classroom built in 1950 contained nearly 400 more square feet of floor space than did the typical classroom of 1930. Improved use of light and color, more attention to acoustics, functional designing of classrooms and equipment, the provision of special rooms for instructional and service purposes and more adequate toilet and handwashing facilities are other important features of newer elementary-school buildings.

New tools for learning

The single textbook, once the principal resource for learning, has been supplemented by a great variety of resources for learning. In 1954, centralized libraries were maintained in 57 per cent of the elementary schools in cities with a population of 100,000 or more, 49.61 per cent of those in cities with a population of between 9,999 and 25,000, 41.93 per cent of those in cities with a population of between 10,000 and 24,000, 37.42 per cent of those in cities with a population of between 5,000 and 9,999, and 40.52 per cent of those in cities with a population of between 2,500 and 4,999. Only 29.85 per cent of the elementary schools in county and rural school systems had centralized libraries. School library standards of the various states list a range of from 200 to 500 pupils as a minimum for requiring a full-time librarian.

[17] Otto, *op. cit.,* p. 614.

The first library school graduate was appointed as a high school librarian in 1900. By 1954, 79.95 per cent of the 14,827 school librarians employed for more than half time were professionally trained.[18]

The use of radio and television for educational purposes has been increasing rapidly in the last few decades. The number of educational television networks increased from 22 stations in 1956 to 30 stations in 1957. These stations were on the air 645 hours weekly during 1957, compared with 197 hours in 1954. A grant of more than $6,000,000 has recently been made by the Ford Foundation for educational television. Experiments were conducted in 1957 in ten city school systems and two state school systems to determine what improvements in learning could be expected from the use of television in large classes. Reports from some of these schools indicate that the project has been highly successful and that pupils can learn as well or perhaps better by receiving a part of their instruction by television.

An increasing number of teachers use motion pictures to bring to the eye and the ear much that the printed page fails to portray. The recording machine is used increasingly to add clearness and vitality to language classes and to make speech a living thing. Resource persons with special talents or special knowledge have been used more frequently in recent years. The artist, the musician, the airplane pilot, the scientist, and the veterinarian are examples of the human resources in the community that have been used to make learning more varied and exciting.

New tools for learning have likewise been developed for teachers during the postwar period. An increasing number of films dealing with teaching and child guidance are being produced. Problems such as how to teach fundamental skills through units of work, how to provide for individual differences, and how to organize and direct the class have been made more vivid and meaningful through the use of educational films. There has been a great increase in descriptive materials written for teachers, in which actual classroom situations are described rather than abstract principles of teaching.

Progress in the education of exceptional children

Exceptional children are those who deviate from the normal in respect to certain traits to a sufficient extent to require special help if they are to achieve their maximal physical, mental, social, and emotional development. Four broad groups of exceptional children have been recognized: the physically handicapped, the mentally retarded, the gifted, and the social deviates or behavior problems. It has been estimated that these children

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[18] *Biennial Survey of Education in the United States—1952–54*, Chapter 6, "Statistics of Public School Libraries 1953–54" (U.S. Department of Health, Education, and Welfare, Office of Education).

comprise from 10 to 12 per cent of the school-age children in the United States.

There has been increasing acceptance during the postwar era of the concept that educational opportunities should be provided for every American child in accordance with his needs and capacities. This has caused an increasing number of school districts to provide special education services. There was a 100 per cent increase in the number of school districts providing such services between 1940 and 1948 and an 83 per cent increase between 1948 and 1953. The number of children enrolled in special schools and classes in public elementary and secondary day schools increased from 338,129 during the 1947–1948 school year to 497,216 in the 1952–1953 school year—an increase of 48.1 per cent. During the 1948–1949 school year, 9,665 teachers were employed in the instruction of exceptional children; in 1952–1953 there were 14,316, an increase of 48.1 per cent. Special schools and classes for exceptional children in 1952–1953 appeared to be reaching about 18 per cent, or roughly 1 in 5, of the pupils in need of such services. Problems of classroom space and availability of qualified teachers appeared to be limiting factors.[19]

Foreign languages in elementary schools

One of the most pronounced developments of recent years has been the rapid growth of foreign-language teaching in elementary schools. The number of pupils in the kindergarten through the sixth grade receiving foreign-language instruction either from their regular teachers or from visiting language specialists grew from 5,000 in 1941 to 300,000 in 1957. The enrollment is rapidly approaching the total number enrolled in foreign-language classes in colleges and universities.[20] Between 1952 and 1955 the number of communities providing foreign-language teaching in public elementary schools increased from 89 to 357, an increase of 300 per cent.[21]

The growth of kindergarten enrollments

The significance of early childhood education has become more clearly recognized than ever before and is supported by more basic research in this

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[19] *Biennial Survey of Education in the United States—1952–54,* Chapter 5, "Statistics of Special Education for Exceptional Children—1952–53" (U.S. Department of Health, Education, and Welfare, Office of Education).

[20] *United States News and World Report,* June 7, 1957, p. 122.

[21] Kenneth W. Mildenberger, "Status of Foreign Language Study in American Elementary Schools" (U.S. Department of Health, Education and Welfare, Office of Education, February, 1956).

field than in most other areas of educational endeavor. The period from birth to six years of age is one of rapid growth and development, and one in which the child's personality pattern is developed to the greatest extent. These and other factors have resulted in the downward extension of opportunities for systematic education to include younger children.

Kindergarten enrollments in public schools increased from 595,000 in 1939-1940 to 1,474,000 in 1953-1954.[22] Almost all the states authorize local school systems to provide kindergartens, and in two-thirds of the states local funds for kindergartens are supplemented by state funds.

Children's achievements—today and yesterday

Criticisms of schools, which date back at least as far as the year 500 B.C., have established new records in the postwar decade. One comprehensive study indicates that criticisms appearing in educational journals alone increased from 3 in 1942 to 49 in 1952 and that the total number of critical articles appearing in both lay and professional magazines in 1951 was well over 100. The same study, however, provides documentation for the statement that negative criticisms did not represent a majority of the total volume of material on education printed by lay magazines and newspapers.[23]

One of the most frequent charges has been that elementary schools have neglected the fundamental; that children spend their time digging in sand piles, cutting out paper dolls, and resting. Critics who have been lambasting the schools on this issue have seldom taken the time to visit elementary-school classrooms in various sections of the United States, to study reports of school surveys, or to examine the factual evidence that exists in dozens of careful studies of children's achievements. Studies of test scores, extending back as far as 1844, show that each successive generation of children has been learning more subject matter than did the previous generation.[24]

A study of test scores made by 230,000 pupils on the same standardized tests in arithmetic, reading, and language usage before and after 1945 reveals that the average scores improved 12 per cent over a ten-year period.[25] Another study indicates that the average child in a given grade today is a full

[22] *Biennial Survey of Education in the United States—1952-54*, Chapter 2, "Statistics of State School Systems: Organization, Staff, Pupils, and Finances—1953-54" (U.S. Department of Health, Education, and Welfare, Office of Education), p. 9.

[23] C. Winfield Scott and Clyde M. Hill, *Public Education Under Criticism* (Prentice-Hall, Inc., 1954), p. 3.

[24] Beryl R. Rock, *Children's Achievement—Today and Yesterday* (The Texas Elementary Principals and Supervisors Association, Austin, Tex., 1954).

[25] "A Comparison of Pupil Achievement Before and After 1945" (California Test Bureau, Los Angeles, Calif.), p. 8.

year younger than was the average child in that grade 35 years ago.[26] A writer who has spent twenty-five years in the field of education has summarized the situation as follows, "The improving levels of standardized test scores clearly suggest that the fundamentals, far from being neglected, are now taught more thoroughly than ever." [27]

The fact that gains have been made in mastering the fundamentals during the last few decades does not prove that these gains have been adequate to meet the demands of the times. It is generally recognized that greater improvement in mastering the three R's will be needed in the decades ahead.

Summary

The twelve-year period between Hiroshima and Sputnik I witnessed more changes in American life than any comparable period in the history of this nation. Changes also occurred in the program of the elementary school during this period, although not as rapidly as the times demanded. This chapter has presented a brief review of the highlights of the postwar era in the society as a whole and in the elementary school.

Highlights of the Postwar Era	*Changes in the Elementary School*
The population of the United States grew rapidly and significant shifts from rural to urban and suburban living took place.	Overcrowded classrooms, shortages of well-qualified teachers, and half-day sessions have been common.
There was a large-scale migration of Negroes from the South to the North and West and from rural to urban areas. The Supreme Court declared racial segregation in public schools illegal.	Integrating this new segment of the school population into the life and program of the school has been a major problem in many elementary schools.
The productivity of American industry increased rapidly. By 1957 the United States, with a sixth of the world's population, was producing half of the world's manufactured goods.	Human skills released by a program of universal education played an important role in this miracle of production.
The advent of automation made it possible to do many jobs with machines rather than with human	Pressures to produce more scientists and technicians have been increasing. More attention is being given

[26] Wendell C. Lanton, "The Proof of the Pudding," *Phi Delta Kappan*, December 1954, p. 136.

[27] Harold G. Shane, "We Can Be Proud of the Facts," *The Nation's Schools*, September 1957, p. 45.

hands. A single worker in 1957 could produce six times as much as his grandfather did a hundred years earlier.

to education for the worthy use of leisure time.

Pressures to conform and threats to creativity increased rapidly in our society.

There has been increasing emphasis on group processes, group conformity, and group judgment in elementary schools.

The United States reversed its policy of isolationism and embarked on a new adventure of active participation in world affairs.

The teaching of foreign languages to elementary-school pupils has increased rapidly in recent years. There is more emphasis also on education for world citizenship.

The amount of money spent by business firms for research on new products increased sevenfold between 1950 and 1957. Research in education also increased, although at a slower rate.

Significant changes have taken place in objectives, learning situations, and the organization of experiences in elementary schools.

The production of air-conditioned housing, radio and television sets, and time-saving kitchen appliances increased rapidly in the postwar era.

Newer elementary-school buildings differ in important respects from those built earlier. The traditional textbook has been supplemented by a great variety of resources for learning.

There has been increasing acceptance of the concept that all American children should be provided with educational opportunities in accordance with their needs and capacities.

The number of special schools and classes for exceptional children have increased rapidly in the postwar era.

The importance of early childhood education through the combined efforts of the home and the school has become more clearly recognized than ever before.

Kindergarten enrollments in public schools have increased rapidly.

Laymen have become more concerned about the program and achievements of the school than ever before. The criticism is frequently heard that modern schools neglect the fundamental subjects.

Factual evidence found in dozens of careful studies of children's achievements shows that the fundamentals are now being taught more thoroughly than ever before, though not well enough, even now, to keep pace with need.

SOME PROBLEMS AND PROJECTS

1. Washington School is in a community to which many Negro families from the Deep South migrate. Often the children in these families have attended school for only a few months out of the year and often the school they attended was poorly equipped with books and other teaching aids. When they transfer to a school in the North attended by children of like chronological age but who have had three times as much schooling, these children are at a disadvantage.

Put yourself in the position of a nine-year-old, moving to a northern city from a farm in the rural South, who has had a total of fourteen months of schooling. What social adjustments will this boy or girl have to make in the new environment? What scholastic adjustments?

What steps should the school take to try to compensate for the child's impoverished intellectual background?

Should these children be placed with their "age mates," or should they be placed in a grade more suited to their level of achievement? Justify your answer.

2. Curriculum specialists feel that in the light of America's present position as a world power the schools from first grade on ought to be paying increasing attention to the development of concepts and attitudes that will lead to an enlightened citizenry—particularly in the area of foreign policy. Because we are a democratic nation, the concepts and attitudes to be developed should reflect our democratic faith. Here are some basic tenets of that faith:

   a. A respect for the dignity of man, regardless of race, creed, or color, and consequent treatment of human personalities on a fraternal rather than a differential basis;
   b. Confidence in the latent possibilities in man and belief that these can be developed even among the present backward nations of the earth, if the opportunity is provided;
   c. Belief that order, liberty, and justice rest upon the consent of the governed;
   d. Confidence in the method of intelligence as a way of settling problems, rather than propaganda, violence, or brutality;
   e. The gains of civilization are the result of mass efforts and should be made available to everyone, not restricted to a few.

As we have previously indicated, the teacher does not develop these

tenets in a single unit of work, but they are continually reflected in what she teaches and in how she teaches.

Here are some units of work commonly taught in the elementary school. What generalizations might a teacher plan to teach in connection with each one that would foster the kind of democratic attitudes that are necessary if world tensions are to be reduced?

Grade 2	Living in Our Community
Grade 3	Mexican Village Life
Grade 5	How the Pioneers Moved Westward
Grade 6	The Arab Peoples
Grade 7	The South American Nations

3. Teachers are sometimes inclined to limit creative activities to such fields as art, music, and writing. Yet the need for creative thinking in the foreseeable future goes far beyond these fields. We need creative thinkers to plan foreign policy, to work on problems of production and distribution, to help eliminate juvenile delinquency, and to work on many other social and economic problems.

Can children be encouraged to be creative in fields other than in art, music, and writing? How can creative thinking be encouraged in arithmetic? In science? In the social studies?

4. Automation will also bring increased leisure time to Americans, as the work week becomes shorter and shorter. What implications does this have for curriculum?

5. Group processes if wrongly used can lead to excessive conformity, as this chapter has pointed out, rather than to desirable interpersonal relationships. In planning learning activities, teachers must be careful to confine group work to those activities that will foster both a spirit of cooperation and a healthy individualism, rather than a drive to conform. Also, group work that obscures the contribution of the able and enables the poorly motivated student to get by with very little work should be avoided.

Of the following activities, which might conceivably foster undesirable attitudes? Desirable ones? Why?

a. A sixth grade sets up a court of law, with pupils elected as judge, jury, and attorneys, to "hear" cases involving infringement of school rules.

b. A student council sets up a miniature government, writes a constitution, and summons individuals who have disobeyed the rules to appear before it.

c. A group of fourth grade boys plan to carry out a science experiment.

 d. *A second-grade class plans ways to improve the play period.*

 e. *A teacher asks the group to evaluate individual reports as each is given by a pupil.*

 f. *A seventh grade is divided into three groups for social studies, with each group to report on one of three topics in connection with their study of Brazil. Each group is supposed to plan how to divide up the topic among its individual members for study and reporting. Then the chairman of the group will make a final report to the whole class.*

SELECTED READINGS

DEPARTMENT OF ELEMENTARY SCHOOL PRINCIPALS, *Contemporary Society: Background for the Instructional Program* (National Education Association, 1957). Themes treated in this reprint of a series of articles from the *National Elementary Principal* magazine include "The World We Live In," "Education for a World in Transition," "Population Facts and Factors," "Economic Bases of Our Society," and "Children in American Culture."

EDUCATIONAL LEADERSHIP, JOURNAL OF THE ASSOCIATION FOR SUPERVISION AND CURRICULUM DEVELOPMENT, *Encouraging Creativity in Teacher and Learner*, National Education Association, Washington, D. C., February 1956. The Article by Ross L. Mooney on "Cultural Blocks and Creative Possibilities" points out that cultural conditions that make it difficult for us to accept ourselves as creative beings are strong. Perhaps, for this reason, we have been trying during the last two decades to make education more creative.

———, *Creativity and the School* (National Education Association, 1956). The editorial by Agnes Snyder, the article by W. H. Whyte, Jr., on "Creativity vs. Organization Life," and the article by Harold Taylor on "Creative Thinking and the Common Man" all stress the need for creative education as an antidote to pressures to conform that exist in the culture.

Life magazine, "Five Fecund Years," July 31, 1950, p. 31. This editorial calls the period from 1945 to 1950 "the most bountiful five-year period in U.S. history." It cites changes in production, the standard of living, advances in medicine, labor relations, race relations, education, and church membership.

MAXWELL, WILLIAM L., "The Impact of Automation on Education," *The Education Digest*, September 1957, pp. 23–26. Explains the meaning of automation, gives illustrations of how it works, and points out some implications for education.

RIESMAN, DAVID, *The Lonely Crowd* (Yale University Press, 1950). A study of the changing American character, with particular emphasis on the increasing influence of the group on the behavior of the individual.

SCHOOL EXECUTIVE MAGAZINE, *The School in a Confused World*, January 1958. Presents statistics on enrollments, school costs, and teacher shortage for 1957. Contains articles on "Adapting the Curriculum to Today's World" and on "TV—Tests of Education's Newest Tool."

TYLER, RALPH W., "The Curriculum—Then and Now," *The Elementary School*

Journal, April, 1957, pp. 364–374. Summarizes recent changes in learning theory, educational objectives, curriculum content, curriculum organization, reading, and foreign languages in the elementary school.

U.S. News & World Report, "10 Amazing Years—1947–1957," December 27, 1957. States that these ten years altered the face of the country. Documents the extent of change in the American home, in means of travel, in recreation, in medicine, and in industry.

WHYTE, WILLIAM H., The Organization Man (Simon & Schuster, 1956). Treats in detail the pressures to conform that have been increasing in the culture and in the schools.

WIENER, NORBERT, The Human Use of Human Beings (Doubleday & Co., 1954). The new science of cybernetics has had a marked influence on theories of communication and control not only in mathematics, engineering, and electronics, but in the social sciences. Professor Wiener points out some of the philosophical implications of cybernetics and explains in detail the manlike machines that have acquired such formidable power in our world.

SELECTED FILMS

Americans All: United States. A two-reel sound film dealing with racial and religious tensions and community programs for combating prejudices. March of Time.

Airplane Changes the World Map. Evolution of the world map: Mercator, Moll-weide, Goode problem of map reading: distance contrasts on the globe by land, water, and air routes. Encyclopaedia Britannica Films.

United Nations in World Disputes. The story of the United Nations organization, with emphasis on its success in settling many of the world's postwar disputes: Indonesia, Palestine, Greece, Korea. Castle Films.

☐ PREDICTIONS about the shape of
things to come, either in our society
as a whole or in the public schools,
are always hazardous. There is the
danger of predicting the future as one
would like to have it, the danger of
overemphasizing one factor and neg-
lecting others, and the danger that
any forecast that is based on available
evidence may be upset by cataclysms
or unexpected events that thrust
themselves into human affairs from
time to time. Nevertheless, there can
be no intelligent planning of the
elementary-school program unless it
is assumed that certain conditions are
more likely to exist in the foreseeable
future than certain other conditions.
Moreover, a careful look at the next
few decades need not represent mere
crystal-gazing; trends that are clearly
observable today provide a sound
basis for estimating what is likely to
happen tomorrow. The alternative to
an honest effort to predict the future
is to accept a philosophy of pure
opportunism.

Glimpses of the
Fascinating Future

Children now enrolled in ele-
mentary schools will, if they attain
the normal life span, live many years
in the twenty-first century; some of
them will, no doubt, be alive in the
year 2060. It is not possible to pre-
dict, with any degree of accuracy, the

CHAPTER

17

The Outlook for
the Future

*The real meaning of the satellite is that
it provides a dramatic glimpse into the
depth and violence of the great scien-
tific revolution in which we are all
caught up and which daily alters all
aspects of our personal and national
lives The message which this little ball
carries to all Americans if they would
but stop and listen is that in the last
half of the twentieth century—nothing
is as important as the trained and edu-
cated mind.*—FRANKLIN D. MURPHY

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details of the world in which these children will live. If we can assume that science and technology will continue to produce changes at a constantly accelerated rate, that mankind will find ways of using the enormous amount of power available for constructive rather than for destructive purposes, and that the quantity and quality of educational opportunities provided will be sufficient to release the potential of more and more children and adults—then the prospects that lie before those who will be living ten, twenty, and a hundred years from now are indeed fascinating.

Most estimates of the future assume that the population of the United States will increase from 175 million to 221 million by 1975; that the average life span will increase from 70 to 80 years by 1965; that college enrollments will increase from 3½ million to 7 million by 1975; that elementary-school enrollments will continue to increase by 1 million and secondary-school enrollments by ½ million a year for many years; and that expenditures for public education will need to be doubled in the next few decades.

The national income from industry is expected to increase from 343 billion dollars to 500 billion dollars by 1965; the per capita income from $2,000 to $5,000 by 2000; and the hours in the work week are expected to decrease from 40 to 24 by 2000 and to 8 by 2057.

The speed of commercial aircraft has been increasing rapidly and is expected to jump in the next few years from 350 miles per hour to 550. Some military planes have perhaps already exceeded 1,000 miles an hour, reducing the time required to fly around the world to 12 hours. The earth satellite, which may soon be carrying human beings, makes the trip in 90 minutes.

Automation promises to take care of the entire operation of bank clearinghouses with only a few expert persons keeping the machines in working order; to produce electronic devices for translating one language into another; to provide libraries with a computer whose magnetic memory can swiftly tabulate and show on a screen where various types of information can be found; and to enable the housewife to prepare a meal in a matter of minutes.

There is little doubt that the future will be made to glow with many new products. The air-conditioned homes, the automobiles with record-players built in, the dial telephones, and color television sets of the present will no doubt suffer from comparison with the new products of the future. It has been estimated that by 1965, 20 per cent of the sales of machinery, 16 per cent of the sales of chemicals, 14 per cent of the sales of textiles, and 7 per cent of the sales of foods and beverages will consist of products that are unknown today.

Leading scientists, both American and Russian, predict that men will soon fly in space, aboard platforms circling the earth. What men can and

will do there leads to interesting speculation. The fateful decision may well make the difference between the most bountiful era man has ever enjoyed and the destruction of civilization.

Some scientific experts see the possibility that great telescopes aboard the artificial satellites could peer down on the earth, observing every troop or airplane or rocket movement of a potential enemy, and hitting any spot on earth with an H-bomb warhead with pin-point accuracy. They visualize a gigantic mirror hung in space that could focus the sun's rays and set fire to a whole city or to a forest. Used for peaceful purposes, earth satellites could vastly improve weather forecasting, communicate voices or messages quickly and accurately anywhere, detect the birth of storms and hurricanes, and perhaps seed clouds to produce rain where needed. The mirror hung in space could light entire cities, disperse killing frosts, and melt icebergs to free ice-bound ports.

The glimpses of the future that are coming to us from radio and television, from magazines and newspapers, and from books in many fields, although differing in detail, have several points of agreement: the rate of change in the future will be swifter and more dramatic, and its effects far-reaching; man's control of his physical environment will make possible a more humane existence than has ever been known before; he will have the power, if he chooses to use it, to sweep away in one second all the great works and ideas that we call civilization; and he must create new designs for education in harmony with the demands of the future that is rushing upon him.

The Elementary School in the Foreseeable Future

The following forecast of the elementary school of the next few decades is based on the assumption that conditions of living will place heavier responsibilities on the school, that research in education and in related disciplines will provide the know-how for more effective educational procedures and programs, and that the increased productivity of American industry will make it feasible to finance a greatly expanded program of elementary education. Some of the conditions described already exist in outstanding elementary schools; others represent needs that have been clearly recognized for years but have not been met because funds have not been available; and others require only a major break-through in cutting down the lag between the formulation and the diffusion of sound educational procedures.[1]

[1] See Margaret Bushnell, "Now We're Lagging Only 20 Years," *The School Executive*, October 1957, pp. 61–63.

Larger elementary schools:
more adequate educational services

The number of one-teacher schools decreased from 96,302 in 1944 to 59,652 in 1950; the number of school districts in the United States decreased from 111,273 in 1944 to 53,197 in 1957; and the number of public elementary schools decreased from 169,905 in 1944 to 128,225 in 1950. These changes were caused in part by the trend toward urbanization and in part by the consolidation of rural schools.

The extent to which children are provided essential educational services depends to a considerable degree upon the size of the school they attend. If the school is too small, it is not feasible to provide, at a reasonable per-pupil cost, the educational services that are considered essential to the growth and development of children. These services include supervision of instruction, health services, a comprehensive system of pupil records, guidance services, special programs for exceptional children, attendance services, a central library, a full-time principal, and secretarial services. Experience indicates that schools with fewer than 500 pupils enrolled can seldom provide these services.[2]

A few comparisons will indicate the extent to which the size of the school influences the provision of essential educational services. In 1948 only 2 per cent of the schools with fewer than 200 pupils enrolled had full-time (supervising) principals; 34 per cent of those with from 400 to 599 pupils enrolled had full-time principals. Only 18 per cent of the schools with fewer than 200 pupils enrolled had full-time secretarial help; 63 per cent of the schools with from 600 to 999 pupils enrolled had full-time secretaries. Median salaries paid elementary-school principals in 1952–1953 were $7,305 in cities with over 500,000 population and $4,388 in cities with from 2,500 to 5,000 population. Median salaries for elementary-school teachers in 1954–1955 varied from $5,110 in school districts with over 500,000 population to $3,465 in school districts with between 2,500 and 5,000 population. In 1953–1954, 57 per cent of the elementary schools in cities with 500,000 population and more had centralized libraries; only 40.52 per cent of those in cities with from 2,500 to 4,999 population had them. In 1947–1948, 84 per cent of the school systems in cities with a population over 100,000 were operating one or more kindergartens; only 53 per cent of the school systems in cities with from 2,500 to 4,999 population were operating one or more kindergartens.

The rapid growth of our larger cities at the expense of the rural communities, together with the trend in recent years toward eliminating small schools in the cities, seems to indicate that the elementary-school children

[2] Educational Policies Commission, *Education for All American Children* (National Education Association, 1948), pp. 77–78.

in the future will be attending larger schools that can provide more adequate educational services.

Special education for the gifted child

Interest in identifying children with unusual ability and providing them with special educational opportunities is not new. Plato suggested that ways be found to identify gifted children so that they could be educated for leadership in the state. Suleiman the Magnificent sent talent scouts throughout Asia Minor in the sixteenth century to select the most intelligent youth to be trained for positions of leadership in the Empire. In this country, as early as 1867, the public schools in Saint Louis, Mo., were allowing gifted children to accelerate their pace rather than to remain in the "lock-step" program. Since the beginning of the twentieth century the emphasis has been primarily on enriched programs for gifted children rather than on acceleration. Programs for gifted children, which emphasized enrichment rather than acceleration, had been developed in Cleveland, Los Angeles, and Rochester by 1920.[3]

Specialists in the field of the education of exceptional children seem to be in general agreement that gifted children have, during the postwar period, received too little attention. This has been particularly true at the elementary-school level. Enrollments in special schools or classes in public elementary schools decreased from 4,080 mentally gifted children in 1947–1948 to 3,683 in 1952–1953. Enrollments in public secondary schools meantime increased from 16,632 mentally gifted children in 1947–1948 to 19,233 in 1952–1953. Mentally gifted children represented only 16.1 per cent of the exceptional children enrolled in special schools and classes in public elementary schools; they represented 83.9 per cent of exceptional children enrolled in special schools or classes in public secondary schools during that school year. In 1947–1948, 622 teachers were employed to teach mentally gifted children; in 1952–1953, 926 teachers were employed for this purpose.[4] However, these data do not give the complete picture because mentally gifted children are not enrolled in special schools and classes to the extent that other types of exceptional children are. They have special provisions made for them in the regular schools and classes through selective courses, ability grouping, and honor clubs and activities.

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[3] Merle R. Sumption, Dorothy Norris, and Lewis M. Terman, "Special Education for the Gifted Child," in *The Education of Exceptional Children*, National Society for the Study of Education, Forty-ninth Yearbook, Part II (The University of Chicago Press, 1950), pp. 259–278.

[4] Biennial Survey of Education in the United States 1952–54, Chapter 5, "Statistics of Special Education for Exceptional Children, 1952–53" (U.S. Department of Health, Education, and Welfare, Office of Education).

One study found that over 90 per cent of the superior high-school graduates who came from families in the upper income bracket were attending college, although only 20 per cent of the superior high-school graduates who came from families in the lower income bracket were doing so.[5] This would indicate that at the time the study was made (1940), lack of financial resources was keeping many gifted boys and girls from achieving maximum educational maturity. Tyler reported in 1957 that only about half of the top quarter of our graduating high-school students went on to college.[6] He lists several nonfinancial reasons why many of our gifted children never reach a fraction of their potential. Some of the reasons are the tendency in many homes and some schools to discourage curiosity and questioning by children, the fact that teachers do not want to take time to provide special work for gifted children, the fact that other children are inclined to treat the gifted child scornfully, and the lack of appreciation for intellectual achievements so prevalent in the society generally.

There is abundant evidence of an upsurge in interest in the education of gifted children during 1956, 1957, and 1958. The increased interest was manifested not only in professional books and journals, but in general communication media that reflected the interest of laymen and of experts in various fields. For example, a book written in 1957 by three top-flight scientists from the California Institute of Technology and addressed to leaders of American industry emphasized the importance of brainpower in coping with "the continually increasing technical complexity of the future." [7]

The increase in the number of books, articles in professional journals, and curriculum bulletins dealing with the education of gifted children has been noticeable. More than a third of the books on special education listed in the *Selected Bibliography for Curriculum Workers* in 1957 were devoted entirely to the education of gifted children or contained chapters on the subject.[8] Ten of the seventeen curriculum bulletins on special education selected for exhibit at the 1957 Conference of the Association for Supervision and Curriculum Development were devoted entirely to the education of gifted children.[9]

Recent publications indicate a changing attitude toward *enrichment*, *acceleration*, and *special grouping* as methods for educating gifted children. Keeping the gifted children in the regular classroom and providing enriched

[5] Sumption, et. al., op. cit., p. 261.
[6] Ralph W. Tyler, "Meeting the Challenge of the Gifted," *The Elementary School Journal*, November 1957, pp. 75–82.
[7] Harrison Brown, James Bonner, and John Weir, *The Next Hundred Years* (The Viking Press, 1957), p. 137.
[8] Association for Supervision and Curriculum Development, *Selected Bibliography for Curriculum Workers* (National Education Association, 1957), pp. 19–22.
[9] Association for Supervision and Curriculum Development, *Current Curriculum Materials* (National Education Association, 1957), pp. 57–58.

programs for them has in the past been looked upon with more favor than placing them in special classes or accelerating their progress through the school program. Providing for the needs of gifted pupils through an enrichment program, however, involves all members of the teaching staff and requires a degree of flexibility in methods and the use of materials that many teachers find difficult to achieve. Some schools have found that gifted pupils are less likely to be neglected if special classes are organized and special instruction is provided without involving the entire teaching staff. Experience with the major work classes in Cleveland indicates that specially grouped students can go faster and deeper than those in the regular classrooms. There is evidence also in recent studies that gifted children frequently benefit from accelerated programs. Those who have given a great deal of study to the problem suggest that it is wiser to approach the question of method with an open mind rather than to commit the program in advance to any one method.[10] Further research is needed before it can be determined definitely in what school situations at what age levels various methods are most effective.

More thorough mastery of the fundamentals

The evidence presented previously that each generation of American children has been achieving a more thorough mastery of the fundamentals than the previous generation does not imply that the present level of achievement will suffice in the years ahead. Our new adventure in world affairs demands that Americans become better informed than ever before and this means that they must be able to read faster and comprehend more fully what they are reading. The fact that more adults than ever before are going to reading laboratories to learn to read faster implies that reading instruction in the schools must aim at greater efficiency. The business or professional man seldom has time to read his trade or professional journals, much less has he time to read what is being written about current events. The housewife seldom finds time to read the best-sellers, keep up with articles she would like to read in popular magazines, and be able to converse intelligently about outstanding performances on the screen and stage. But time would not be such a limiting factor if they had the skill to read more in the time that they have. A leading authority in reading suggests that the "horse-and-buggy" rate of 300 words a minute may become a "rocket" rate of 1000 words a minute.[11]

Better preparation of teachers in the future, preparation that will give

[10] Paul H. Bowman, *et. al*, *Planning and Initiating Programs for Gifted Children* (Midwest Administration Center, The University of Chicago, March 1957).

[11] Nila Banton Smith, "Historical Turning Points in the Teaching of Reading," *National Education Association Journal*, May 1952, p. 282.

them a better understanding of the complexity of the reading act; greater quantities of books, books so great in variety that every child can find many that appeal to him; contributions to teaching methods that may come through movies and television; innovations in methods of grouping and regulating pupil progress, methods that permit each child to progress according to his own pattern; more specialized school personnel to assist teachers in meeting the needs of individuals; and a constant increase in the amount of research relating to reading—these and other developments can be expected to result in a type of reading instruction that will be much better suited to the needs of the child and to the demands of the culture. It was reported in 1953 that 2,700 studies of the teaching of reading had been made.[12] This indicates that scholarly effort was being persistently applied to the problem. Because of the important role that skill in reading will play in the complicated life of the future, it can be expected that research in this area will increase in volume.

The reference cited above states that 1,100 studies of arithmetic were available in 1953 and evidence has been presented previously to indicate that each generation of American children has been learning arithmetic more thoroughly than the previous generation. This does not imply, however, that the present level of achievement in arithmetic will suffice in the decades ahead, when increasing the supply of scientists and engineers will be such a vital factor in national survival. In the elementary school of the future, the "lock-step" system of teaching arithmetic will be abandoned, each child will work on tasks that are related to his ability and achievement, and instruction in arithmetic will be closely related to out-of-school uses and applications.

The three R's plus

If a dictator or a small group at the nation's capitol controlled education in this country, the task of producing more scientists and engineers would be relatively simple. The educational system in the Soviet Union, for example, is organized to produce a large number of scientists and engineers, at the expense of other fields of study. The high-school graduate in Russia has had six years of biology, five years of physics, four years of chemistry, and four years of mathematics. If he graduates from college with a specialization in science or engineering, as many of their young men and women do, he can join one of the most privileged classes in Russia; but he will be told where he can work.[13]

One of the "great debates" that has been gaining momentum since the

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[12] William Van Til, "Research Affecting Education," in *Forces Affecting American Education* (Association for Supervision and Curriculum Development, National Education Association, 1953), p. 120.

[13] Harrison Brown, et al., *op. cit.*, pp. 144–145.

launching of the first earth satellite by Russian scientists has been concerned with the direction that public education should take in this country. Our nation could institute rigid controls of education, minimize the nontechnical offerings of the schools, and turn out as many scientists as the Russians do. This is the direction in which many would apparently have us travel. Others, including many of our leading scientists, believe that this course would entail too great a cost in terms of freedom. They recognize that we must have more scientists and engineers, but they believe that we cannot afford to imitate the Russian method of getting them. A world-famous geneticist expressed this point of view very concisely when he stated,

> Our social requirements call for a varied intellectual diet for the fulfillment of healthy world citizenship. A varied intellectual diet cannot consist solely or even largely of science courses which at the moment seem directly related to vocations or to national defense. It must include the vitamins of the humanities, the minerals of the arts and the salts of the social sciences.[14]

For more than a hundred years the schools in this country have been dedicated to the preservation and extension of democratic ideals and to the development of the highest type of democratic citizenship. As a result, the schools in the United States have developed into a different kind of institution from the schools of other countries. During the nineteenth century, they played an important role in the "Americanization" program, through which millions of children who came to us from many parts of the world were integrated into the American way of life. Nearly every foreign observer has singled out this program as one of the *distinguishing characteristics* of public education in the United States.

Today the major changes that are occurring in American society accentuate the need for improved social education. Population changes, the impact of automation, *developments in transportation and communication, the increasing interdependence of peoples* throughout the world, the increasing need for conserving natural resources, and the problem of utilizing science and technology for the good of all mankind place those phases of the school program that deal with *human relationships in a position of major importance.*

As our people come to realize more clearly what it means to live in a global society and to assume leadership in that world community, the pressure will increase for a *balanced curriculum in the schools,* each area of which contributes to the development of insights into human relationships. The social studies have a unique role to play in introducing children to the world in which they live. They draw material from history, geography, polit-

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[14] Unpublished address by Laurence H. Snyder, Dean of the Graduate College, University of Oklahoma, delivered at the Thirteenth Annual Conference of the Oklahoma Association for Supervision and Curriculum Development, Norman, Okla., February 8, 1958.

cal science, economics, anthropology, sociology, science, and the arts. They stress critial thinking, problem-solving, and the use of the scientific method in dealing with man's attempts to use his intelligence to understand the world in which he lives and the people who share his global habitat. Because the future of our civilization revolves around the question of whether man can learn to live with man, the curriculum of the elementary school in the twentieth and twenty-first centuries must be increasingly concerned with the problem of human relationships.

Breaks in the lock-step system

The regimentation of children, an inheritance from the schools of the nineteenth century, persists today despite abundant evidence that children differ widely in rates of learning. The evolution of graded schools in this country, the problems arising from this system, and attempts to break the lock-step system by various administrative devices have received a great deal of attention in books on the history of American education.[18]

The graded school grew out of conditions existing in the nineteenth century, when public-school systems were being established in this country. The desire to provide educational opportunities for all children, the necessity of dividing children into groups for instructional purposes, the relative simplicity of giving a single assignment to an entire class, the scarcity of instructional materials, the development of carefully graded textbooks, the necessity of maintaining large classes, the low level of teacher preparation, and the factory-like precision that seemed to characterize a sharply graded school system were some of the factors that contributed to its establishment. Once established, it soon became a device for escorting all pupils in a given grade through the same curriculum content, with little regard for the individual differences existing among them.

Competent teachers and principals have for many years been attempting to reduce the peril of regimentation inherent in the graded school organizational pattern through providing more flexibility in assignments, in instructional materials, and in regulating and reporting pupil progress. There has been increasing acceptance in recent years of the philosophy of continuous growth, which holds that each child should be assisted in growing according to his natural pattern, without depriving the bright child of the opportunity to learn as much as his ability permits or forcing the less capable child to work on tasks that are beyond his capacity. Programs designed to implement this philosophy have recently been developed in many elementary schools.

[18] For an interesting summary of these developments see Emmett A. Betts, Foundations of Reading Instruction (American Book Co., 1950), pp. 3–65.

Descriptions of these programs have been appearing frequently in educational journals and in lay publications.[16]

The ungraded unit is one plan for providing continuity in the learning experiences of boys and girls. When pupils were organized for learning into grade-level groups roughly corresponding to chronological ages, there was a considerable degree of continuity in the content to be covered from one grade to another but very little continuity in the actual experiences of pupils. An increasing number of elementary schools are eliminating annual promotions, at least during the first three years of schooling. The content of the curriculum for the primary grades is divided into a number of sequential levels, with pupils progressing from one level to the next in each subject area in terms of their own ability and rate of learning. Most pupils remain in the primary unit three years, although a few may complete the work in two years and a few may require four years to complete it. In some schools pupils who complete the work of the primary unit go into another unit called the intermediate unit, which is also ungraded. In these schools the primary unit and the intermediate unit comprise the elementary-school curriculum commonly known as grades 1 to 6.

In 1955, Goodlad reported that 16 school systems in as many states were using some form of continuous progress program. The number has been increasing rapidly since that time, if one may judge by the number of schools whose programs have been described in both professional and lay publications. Although these plans are not all alike, some basic features are common to most of them: (1) each unit—primary and intermediate—has a number of progress levels, usually eight or ten; (2) progress levels are usually geared to reading achievement; (3) pupils progress from one level to another in terms of individual readiness instead of from one grade to another; (4) curriculum content is organized along vertical, sequential lines rather than along horizontal, graded lines; (5) a more effective use of standardized tests and other evaluation procedures is required; and (7) teachers and parents go

[16] The following references are particularly valuable for getting an idea of the extent and nature of innovations in this respect:

a. "What Are Levels?" *Childhood Education*, December 1955.

b. Association for Supervision and Curriculum Development, *A Look at Continuity in the School Program* (Association for Supervision and Curriculum Development, National Education Association, 1958).

c. Ethel Thompson, "The Ungraded Plan," *National Education Association Journal*, January 1958, pp. 16–18.

d. John Goodlad, "Reading Levels Replace Grades in the Non-Graded Plan," *The Elementary School Journal*, February 1957, pp. 253–256.

e. *Ibid.*, "More About the Ungraded Unit Plan," *National Education Association Journal*, May 1955, pp. 295–296.

f. Roul Tunley, "Johnny Can Read in Joplin," *Saturday Evening Post*, October 26, 1957, pp. 27–110.

g. Loy Ferguson, "First Ungraded School Treats Johnny as Individual," *The Daily Oklahoman* (Oklahoma City), January 19, 1958.

through an intensive period of preparation before the plan is placed in operation.

The recent upsurge of interest in making better use of our human potential, together with evidence that the lag between the formulation and the diffusion of sound educational procedures is decreasing, seems to indicate that elementary schools of the next few decades will develop designs for regulating pupil progress that are more in harmony with individual needs and abilities than is the case with the graded school pattern of organization.

Better qualified teachers

The elementary-school teacher plays an important part in the life of the child. During the hours that the child spends in school, the teacher takes the place of his parents because most parents do not possess the professional competence for this phase of the child's education and because they must devote their time and energy to other activities. The teacher also serves as a representative of the state, sharing with other educative agencies the responsibility for educating the child to become a competent member of a democratic society.

The amount and kind of preparation required for elementary-school teachers has been changing rapidly in recent decades. In 1932, only 12 per cent of the elementary-school teachers possessed a baccalaureate degree or higher preparation; in 1955, roughly 70 per cent of the elementary-school teachers held baccalaureate degrees or higher preparation. Teachers colleges are not preparing as large a percentage of elementary-school teachers as they were a quarter of a century ago. In 1931, teachers colleges prepared 60 per cent of the elementary-school teachers; in 1955 they prepared only 23 per cent, while general colleges and universities prepared 77 per cent.[17] The length of college preparation required for an elementary teaching certificate has increased during the last few decades from two years to a full four years.

The student who seeks admission to a teacher-education program in most colleges and universities must present satisfactory grades and, after she is admitted to the program, she must maintain an even higher scholastic average. Instead of spending a great deal of time on professional education courses during her first two years in college, as students in normal schools did, she spends her first two years in a program of liberal education and continues this preparation along with courses in professional education during the remaining two years. The program in liberal education includes English, speech, philosophy, psychology, art, music, physical sciences, biological

[17] Lindley J. Stiles, *The Teacher's Role in American Society* (Harper & Brothers, 1957), pp. 279–281.

sciences, and social sciences. The program of general or liberal education provides the elementary-school teacher with a cultural background that gives her status in the community and enables her to teach the many subjects that are a part of the elementary-school curriculum.

Less than half of the last two years of college preparation for the prospective elementary school teacher is devoted to professional education. Educational psychology, child growth and development, the school in American society, educational guidance, curriculum development, educational measurements, general and special methods of teaching, and directed student teaching are usually included in the professional education program.

In 1946, the National Education Association created the National Commission on Teacher Education and Professional Standards. The Commission was charged with the responsibility for raising professional standards by working on selection, preparation, teacher certification, in-service education, and accreditation of institutions that prepare teachers. Realizing that citizens are going to have to be more broadly and richly educated than ever before in our history, the Commission is currently calling for a program of teacher education with standards that are comparable to those for other professions, such as law and medicine. The Commission believes that this will require at least five years of college preparation and looks forward to the day when teachers will be required to attend college six years before receiving certificates.

If current trends are projected into the future, the elementary-school teacher in the next few decades will have at least five years of college preparation, will have a broad background of general education, will possess professional competencies comparable to those of other professional persons, will be able to gain tenure by competent service, and will continue to draw compensation after retirement.

Changing concepts of the teacher's function

The current shortage of well-qualified teachers, which is but one aspect of the shortage of college-trained personnel for all purposes, is likely to increase rather than decrease in the years ahead. This fact, together with the increasing professionalization of teaching, points to the need for conserving and using effectively the teaching talent that is available. It will be necessary in the years ahead to give more attention to providing a favorable environment for teaching, and to eliminating conditions that discourage some teachers, prevent others from teaching as well as they know how, and drive others out of the teaching profession. Many school systems are already finding ways to relieve teachers of time-consuming, nonteaching chores, to provide more

effective administration and supervision, to assist teachers in getting oriented to the school and community, and to make other provisions for raising the morale and increasing the efficiency of teachers.

At the same time that school systems are taking steps to release the time and energy of teachers for the important task of teaching, more specialized school personnel is being provided to assist teachers in locating and providing for children with special problems. School physicians, nurses, psychologists, psychiatrists, social workers, guidance workers, and librarians work closely with classroom teachers in an increasing number of school systems and help to release the time of the teacher for instruction of pupils.[18]

As homes become better supplied with reading materials; as public libraries, museums, art galleries, and other resources of the community are made available for learning activities of children; as businesses and industries in the community make special provision for school children to visit them and get information; in short, as the resources for learning are broadened, the child's education ceases to come exclusively from the teacher and from the classroom. The teacher's role becomes less that of giving out information and more that of coordinating and guiding the learning that comes from many sources. This process requires a great deal more professional skill than merely hearing lessons and giving out information. The observer in many modern elementary-school classrooms is impressed by the extent to which teachers are assuming this newer role and by the effect that it has on the behavior of children.

Classrooms with the forward look

There is evidence that the influence of science, and technology, which has revolutionized farming, banking, manufacturing, communication, transportation, and the preparation of meals, is beginning to invade classrooms. In the past the teacher who understood the contributions that audio-visual materials could make to effective teaching or who wanted to provide pupils with opportunities to engage in multiple learning activities was too frequently thwarted by outmoded equipment and inadequate furniture. How many teachers have thought, as they struggled with darkening the room, setting up the projector and the screen, and operating the projector, "Is it worth the effort?" How many have been discouraged from attempting to divide the class into groups, to use dramatic play, or to encourage experimentation, by rows of desks screwed down to the floor? How many capable young teachers have asked themselves the question, "If this enterprise is as important as I have been led to believe, why must I work with outmoded tools?"

[18] See National Society for the Study of Education, *Personnel Services in Education*, (University of Chicago Press, 1959), Chapter 5.

School equipment manufacturers have come up with a teacher's desk that is as modern as the guided missile. This desk of tomorrow has a panel that contains buttons to close window draperies, turn off room lights, swing the television receiver into position from its hidden recess, and control motion picture equipment and other teaching devices. These electronic units are expected to be in use in new classrooms all over the United States within a few years to contribute to the effectiveness of teaching.

After a careful study of the kinds of activities in which elementary-school pupils engage, a work-center type of furniture for pupils has been designed. For a classroom of 32 pupils the following pieces of furniture are provided: two rectangular tables six feet in length; two round tables three and one-half feet in diameter; eight table-desks three feet square; four book compartments placed on each of the eight table-desks—enough for 32 pupils; thirty-two pupil chairs; stuffed (upholstered) furniture consisting of two pupil chairs and a settee large enough to accommodate two pupils; two movable bookcases four feet long, mounted on rubber casters; two easels; and a teacher's desk and chair. All pieces of furniture are designed so that they can be easily moved and arranged. On the back of each portable bookshelf is either a chalk board or a tack-board surface. Experimentation with this type of furniture led to the conclusion that, "The instructional program in classrooms using the experimental furniture was more in harmony with tenets of modern educational theory than was the instructional program in classrooms using conventional furniture." [19]

These and other innovations indicate that the elementary-school classroom of the future will contain furniture and equipment that will permit a more creative program of education than is possible in the typical classroom of the present.

Summary

There can be no intelligent planning of the elementary-school program unless it is assumed that certain conditions are more likely to exist in the society of tomorrow than certain other conditions. This chapter has presented a brief summary of predictions concerning the future of our society and of the elementary school, based on trends that are clearly observable today.

Glimpses of the Future	Foreseeable Changes in the Elementary School
The population of the United States is expected to increase from 175	Elementary-school enrollments are expected to continue to increase by

[19] David C. Sanders, *Innovations in Elementary School Classroom Seating*, Bureau of Laboratory Schools, Publication No. 10 (The University of Texas, 1958), p. 145.

million to 221 million by 1975.

about a million a year for many years.

The population of urban communities is expected to continue to increase at the expense of rural communities.

Children in the future will be attending larger schools that can provide more adequate services.

The national income is expected to increase from $343 billion in 1957 to $500 billion by 1965.

Expenditures for public education will need to be doubled in the next few decades.

The rate of change is expected to be swifter and more dramatic and effects more far-reaching in the future than it has been in the past.

Children in elementary schools will need to learn the fundamentals faster and more thoroughly than ever before.

The impact of automation, of man's conquest of outer space, and of the complicated international scene will call for the maximum development of our intellectual resources.

Elementary schools will develop new designs for regulating pupil progress, grouping for instruction, and meeting the needs of gifted children.

Man's increasing control of his physical environment will make possible a more humane existence than has ever been known before if he chooses to use his increased power for constructive rather than for destructive purposes.

The curriculum of the elementary school of the future will emphasize the humanities, the arts, and the social studies as well as mathematics and science.

Conditions of living in the next few decades will demand a major breakthrough in the quantity and quality of education provided for children and adults.

The elementary-school teacher in the next few decades will have at least five years of college preparation, will have a broad background of general education, and professional preparation comparable to that of other professional persons.

In the highly complicated life of the future, education will become so vital an enterprise that it cannot be left entirely to schools and teachers.

Homes, public libraries, museums, art galleries, business, industries, and other resources for learning will be utilized more extensively and the teacher's role will be that of guiding and coordinating learning.

Science and technology have revolutionized farming, banking, manufacturing, communication, transportation, and the preparation of meals.

Innovations in furniture and equipment are making the elementary-school classroom a more creative environment for living and learning.

SOME PROBLEMS AND PROJECTS

1. Some exceedingly vocal critics of public education are now vigorously attacking professional education for teachers. They are arguing that any graduate of a liberal arts college is prepared to teach children; they object strenuously to state certification requirements that deny certification to those who have not taken courses in educational psychology or child development; curriculum and methods of teaching; philosophy, history, or principles of education, and student teaching. The critics cite as example, an admiral, an executive in a great university, an eminent physicist, and a housewife who graduated from a famous women's college fifteen years ago as a Phi Beta Kappa and who, as a mother, is an expert on children—all of whom the critics believe are eminently qualified to teach. Knowledge of subject matter is the sole requirement of a good teacher, according to their school of thought.

Professional educators, however, argue that knowledge of subject matter is only the first requirement of a good teacher. She must also know children, know her goals, know how to organize material to teach to children, and know teaching methods and materials. When a teacher only knows the subject matter, the children are likely to suffer.

Take, for example, the student who had completed her year's work in the biological sciences, with a B grade, in the biology department of a large midwestern university. When asked in a methods course to list the generalization about insects suitable for second-graders to learn, she listed:

a. All insects have three parts to their bodies.
b. All insects have three pairs of legs.
c. All insects lay eggs.
d. Insects lay eggs which hatch into worms.

The third generalization is a minor error; not all insects lay eggs. But the fourth reveals a distressing lack of knowledge about how living things are classified, since insects and worms are in two separate phyla. When questioned about the error, the student said that she knew insects were in a different phylum but that she thought larvae was too hard a term for second-graders! Lack of subject matter was not at fault here, but a lack of knowledge of children and of the importance of teaching the truth as best we know it when we teach science to children.

Find out from your state department of education what the certification requirements are for the state in which you would prefer to teach. What is

the proportion of liberal arts credits to professional education required by the state? In what way do these requirements protect the children in the elementary school? What problems might the admiral who had never studied educational theory and methods find difficult to solve, as he faced a first-grade class on the first day of school? A high-school algebra class? What problems might be difficult for a graduate of the typical two-year teacher-training institution that existed three or more decades ago?

2. Larger elementary schools can provide more adequate services for children, but they sometimes create problems of human relations. In the small neighborhood school, all the children know one another; relationships are on a personal basis. In the large school, many pupils and teachers are strangers to one another and the concern for others that is fostered in the more intimate environment is lacking. Below are described three kinds of problems the large school might have. What would you recommend in each case?

    a. You are a first-grade teacher (there are no kindergartens) in a twenty-four-room elementary school. What are some of the experiences you might plan for the first few weeks of school to help your pupils feel at home in such a large building?

    b. In some large schools, a deep chasm exists between "little kids" and "big kids." The children in the primary grades look upon the children in the upper grades as monsters who are continually picking on them and the older youngsters regard the younger as little pests who are always tattling and causing trouble. What experiences might you plan as either a primary or an upper-grade teacher to improve relationships?

    c. There are four sections to the sixth grade in the elementary school where you teach. Each is highly competitive and the pupils in one section are very hostile toward pupils in the other three. As a sixth-grade teacher, what can you do to reduce the hostility?

3. Interview three elementary teachers to find out their nonteaching activities in the school. If possible, observe these same teachers at work in the classroom to see if there are additional activities that have been overlooked. Are there some activities that might better be performed by someone other than the teacher?

4. As you observe in the classroom, note suggestions for ways the teaching environment might be improved. What teaching aids are readily available? Does the teacher have science equipment in the room or must this be borrowed from the office? What aids for teaching arithmetic do you see?

For teaching social studies? Are supplies accessible to the children or must they use teacher-time to procure them?

Find out from the teacher whether there is a petty-cash fund for the purchases of odds and ends, or whether the teacher and pupils must supply them.

SELECTED READINGS

ASSOCIATION FOR HIGHER EDUCATION, *A Bold New Look at the Not-Too-Distant Future*, Current Issues in Higher Education (National Education Association, 1957). Contains thought-provoking articles on "The Next Two Decades: Coming Changes in American Life," "Forethought for Tomorrow's Needs," and "The Tools for Tomorrow."

BROWN, HARRISON, BONNER, JAMES, and WEIR, JOHN, *The Next Hundred Years* (The Viking Press, 1957). Three leading scientists from the California Institute of Technology present a forecast of the future based on projections of current trends.

DRUCKER, PETER F., *America's Next Twenty Years* (Harper & Brothers, 1955). Deals with the implications of automation for education, population trends, increasing college enrollments, and the democratization of business ownership.

EDUCATIONAL LEADERSHIP MAGAZINE, *Education for the Foreseeable Future*, Association for Supervision and Curriculum Development (National Education Association, October 1957). The editorial by Leeper on "Education for the Foreseeable Future," the article by Lund on "A Probable Image of the Future," and the articles by Rasey on "Some Aspects of Education in the Foreseeable Future" are particularly useful

HUNNICUTT, C. W., *Education 2000 A.D.* (Syracuse University Press, 1956). Reports eighteen lectures given at the School of Education of Syracuse University on the present status and probable directions of elementary education in our country.

KENWORTHY, LEONARD S., *Introducing Children to the World* (Harper & Brothers, 1956). Chapter 1, "Education for the Twentieth and Twenty-first Centuries," deals with the air age, atomic power, population problems, international relations, and the implications of recent changes for education.

KYTE, GEORGE C., *The Elementary School Teacher at Work* (Henry Holt and Co., 1957). Chapter 16 explains the changes that have taken place in the preparation of elementary-school teachers in recent decades.

N.E.A. JOURNAL, *Today and Tomorrow in Elementary and Secondary Education* (National Education Association, January 1958). Presents a summary of school statistics for 1957–1958. Has articles dealing with the ungraded primary plan, the self-contained classroom, and tomorrow's elementary-school teacher.

ROCKEFELLER BROTHERS FUND, "The Pursuit of Excellence," *Ladies Home Journal*, July 1958, pp. 44–126. This article presents the substance of Report V, written by John W. Gardner. It takes the position that we can

cultivate the ideal of excellence while retaining the moral values of equality of opportunity. States that we must expand our facilities for teaching science, but warns against training scientists so narrowly that they are unprepared to shoulder their responsibilities as citizens.

STYLES, LINDLEY J., *The Teacher's Role in American Society* (Harper & Brothers, 1957). A distinguished panel of educators appraises the professional problems that teachers face today and weighs the broadened functions of the teacher in an age of social and scientific change.

SELECTED FILMS

Secure the Blessings. A three-reel sound film explaining the role that schools play in our democratic society. Good schools and poor ones; schools as they are today. National Education Association.

Skippy and the Three R's. A three-reel sound film giving a detailed account of how children in modern schools learn the fundamentals and at the same time learn to understand the world about them. National Education Association.

The Three R's Plus. A three-reel sound film presenting classroom scenes that point up graphically many important responsibilities of the modern elementary school, including the teaching of the three R's. McGraw-Hill.

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APPENDIX

What's Recommended in Education
for All American Children[1]

Organization of Schools and Classes

1. Every child should be in a group where he is accepted by others and can enjoy the normal social relationships which build confidence and wholesome personalities.
2. Educational services of the public schools should include kindergarten and nursery school ages.
3. Children should spend, as a rule, two or three years with the same teacher.
4. In one-teacher schools, children of different ages and grade levels should be grouped together so that there will be fewer and larger groups than would be the case if each age or grade group were handled separately.
5. School services should be available during the entire year and during evenings as well as during the day—the staff for such expanded services being secured by adding personnel and increasing salaries.
6. Each teacher should have freedom to plan his own daily program, except for lunches and other periods which must be planned for an entire school.
7. Exceptional children should be members of normal class groups, except for periods when special help is necessary or for extreme cases requiring placement in special institutions.
8. Children with poor health should be given an adjusted school program in accordance with instructions from their attending physicians.
9. There should be a maximum of five hundred pupils in any one elementary school.
10. Average class size should be greatly reduced to an average of twenty pupils.
11. Seasonal fluctuations in enrollment should be absorbed wherever possible in the regular schools by dividing classes and increasing staffs.

[1] For additional recommendations see Educational Policies Commission, *Education for All American Children* (National Education Association, 1948). The summary quoted here is not an official document of the Commission. It was prepared by the Department of Elementary School Principals of the National Education Association.

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Administration

12. Small school districts should be combined into larger districts, each under a single administrative head, but administrative functions should be decentralized except in matters wherein efficiency clearly requires centralization, thus permitting individual schools to adapt their programs to the distinctive needs of their respective groups of pupils and neighborhoods.

13. There should be a full-time principal in every elementary school.

14. Members of the administrative and teaching staffs should interpret the work of the schools to the citizens of the community and plan for school improvement.

15. Close working relationships should be established between the schools and community social agencies.

16. School health clinics and visiting nurses should provide services for parents, prospective parents, babies, and preschool children, as well as for children enrolled in school. Such clinics should be equipped and staffed to provide psychological and guidance services as well as medical and dental services. Teachers should be permitted and encouraged to utilize such clinical facilities for obtaining assistance in dealing with particularly perplexing problems which any child may have.

17. School facilities should be available in the evening for children or adults to use in any constructive community or educational program.

18. A "home visitor" should be a member of the school staff, with responsibility for maintaining effective contact between the school and the homes of its pupils; in addition, each teacher should also hold conferences with the parents of all his pupils.

19. Policies and practices with respect to pupil grouping, promotion, and cumulative records should be consistent throughout both elementary and secondary schools within the same school system.

20. Public education should receive a substantial proportion of the national income, and total expenditures for public elementary education should be doubled.

21. Federal, as well as local and state, revenues should be available to assure opportunity for the adequate education of all children.

22. School revenues should be derived from a variety of tax sources.

23. A uniform rate of property assessment for purposes of school taxation should be applied throughout a state.

Pupil Personnel

24. Measurements of the following facts should be taken on each child whenever and as often as required: height, weight, mental age, aptitudes, reading readiness, and emotional development. An individual test of mental ability should be given each child on entering the school system and at such other

times as seems desirable. Group tests of mental ability should be given to all elementary-school pupils at approximately two-year intervals.

25. *Objective measurements* should be supplemented by anecdotal records and information about activities in school, home, and neighborhood.

26. Periodic health examinations should be made of all children, with parents present to plan follow-ups if necessary.

27. An individual health record should be kept for each child.

28. Records of children who are the primary responsibility of a particular teacher should be kept at hand by the teacher.

29. Achievements should be evaluated in terms of ability.

30. Nurses, physicians, and teachers should confer when necessary to adjust the school program to meet the health needs of individual children.

31. School physicians and psychologists should be available to counsel parents on problems of child growth and development.

Teaching Staff

32. Teachers should be employed and adequately paid for year-round service, with one month's vacation. During their eleven months "on the job," teachers should have time free from responsibility for direct work with children in order to engage in professional study, for preparation for school activities, and for participation in community programs.

33. Teachers' salaries should be determined by preparation and experience rather than by the age of children being taught.

34. *The teaching schedule* should allow ample time for each teacher to plan and evaluate.

35. *Secretarial help* should be provided to free teachers for professional service.

36. Boards of education should operate workshops, seminars, and conferences to aid the in-service education of teachers.

37. Continuing education concerning the growth and development of young children should be offered all elementary-school teachers while in service.

38. Arrangements should be made for teachers to visit schools in other school systems for special purposes and to visit other schools in their own school system on a regular schedule.

39. Arrangements should be made for teachers to exchange positions (for short periods of time up to a year) with teachers in other schools in the United States and abroad.

40. The teacher of a one-teacher school should receive *occasional assistance* on special problems from other staff members of the larger district of which the school is a part.

41. Teachers should participate with the administration in selecting new personnel for the teaching staff.

42. Every teacher should belong to his local, state, and national professional associations and to other specialized organizations.

43. The school system should help teachers, particularly new teachers in the community, to locate living quarters; in larger cities, the Board of Education should build apartment buildings especially for teachers.

44. Teachers should be held responsible *to children* for every aspect of their total growth; *to parents* for consultation and advice concerning the education of their children; *to the community* for the provision of information on education; and *to the school system* for active participation in the development of educational policies and for loyal execution of policies to which the system, through democratic procedures and legally constituted authority, has given approval.

Curriculum and Teaching

45. All teachers should participate in curriculum-planning.

46. Each teacher should be free to utilize cooperative teacher-pupil planning in selecting and adapting the activities suggested in courses of study.

47. Teachers should study the community in order to become acquainted with distinctive educational resources that might be used by the school.

48. Children's experiences in the community should be used as a starting point for broader learnings. Such experiences should include attendance at adult meetings and visits to local institutions and industries, with parents sometimes accompanying their children on such excursions.

49. Resourceful people in the community should be invited to bring their special knowledge and interest to the school.

50. The same achievement should not be expected of all children.

51. The appraisal of results should be in terms of the behavior of children, as well as in terms of what they know and what they can do.

52. Efforts should be made to develop the talents of each child.

53. Children should be helped to explore their special interests.

54. Programs of citizenship education should endeavor to develop sturdy, independent initiative while at the same time emphasizing social responsibility and cooperative skills.

55. Skill in reading, writing, and arithmetic should be a major objective.

56. Systematic learning in science, home life, industrial arts, music, and health should be provided.

57. The elementary-school program should provide for basic health education.

58. Habits of good workmanship should be emphasized.

59. Critical thinking and constructive discussion should be encouraged.

60. The educational program should include a varied program of recreation, dramatics, music, reading, hobbies, and sports, many of which activities should be carried on in cooperation with youth organizations.

61. Auditorium and assembly activities should *grow out of classroom experiences.*

62. Camping experiences should be provided for all children at camps operated by the schools throughout the year.

63. Small business enterprises should be established and operated by the school as a means of training children in economic skills.

64. *The school should provide a service through which the employment of young people,* either for pay or for community service without pay, is given the greatest possible educational value and proper safeguards.

65. For the severely handicapped mentally, there should be programs which should include handwork, personal grooming, buying, and the basic economic skills.

66. Children who are not well adjusted socially should be given special help to take part in the life and program of the school.

67. Children in the last year of elementary school should have several planned contacts with the secondary school and members of its staff.

68. Parents should be kept thoroughly informed of the progress of children by means of planned individual conferences with teachers and by annual reports giving full information about growth in physique, skill, knowledge, habits, social maturity, and emotional stability.

Buildings and Equipment

69. School buildings should be planned with the help of teachers, pupils, and other citizens.

70. School buildings should meet basic standards of health and sanitation.

71. The school building should have special rooms for administration, *books and supplies,* school library, lunchroom, auditorium, playroom, a room for community use, and a health suite including a room with cots where children may rest.

72. School sites should be not less than ten acres.

73. *Playgrounds should be, wherever possible, adjacent to school sites.*

74. School sites should include facilities for growing and caring for plants and animals, and city schools should own land outside the city on which children can have supervised experiences in simple farming operations.

75. All rooms in elementary schools should be on the ground level, with direct access to the school grounds from each classroom.

76. Well-designed, built-in storage space should be provided in each classroom.

77. Every child should have his own chair which can be moved where he wants it.

78. Each classroom should have a phonograph and radio.

79. School libraries should contain good collections of books, pictures, records, bulletins, and exhibits; should also be used for learning activities, such as free reading; and should be open throughout the year to adults as well as children.

80. Adequate instructional materials should be made available to all teachers by (a) spending more money for purchasing them, (b) following consistent long-range plans for purchase of supplies over a period of years, and (c) maintaining centers cooperatively with other schools or school districts for distribution of the more expensive and less frequently used learning aids.

81. Arrangements should be made for loan of materials between the schools and museums, libraries, and musical organizations.

82. School buses should be available for pupil excursions into the community.